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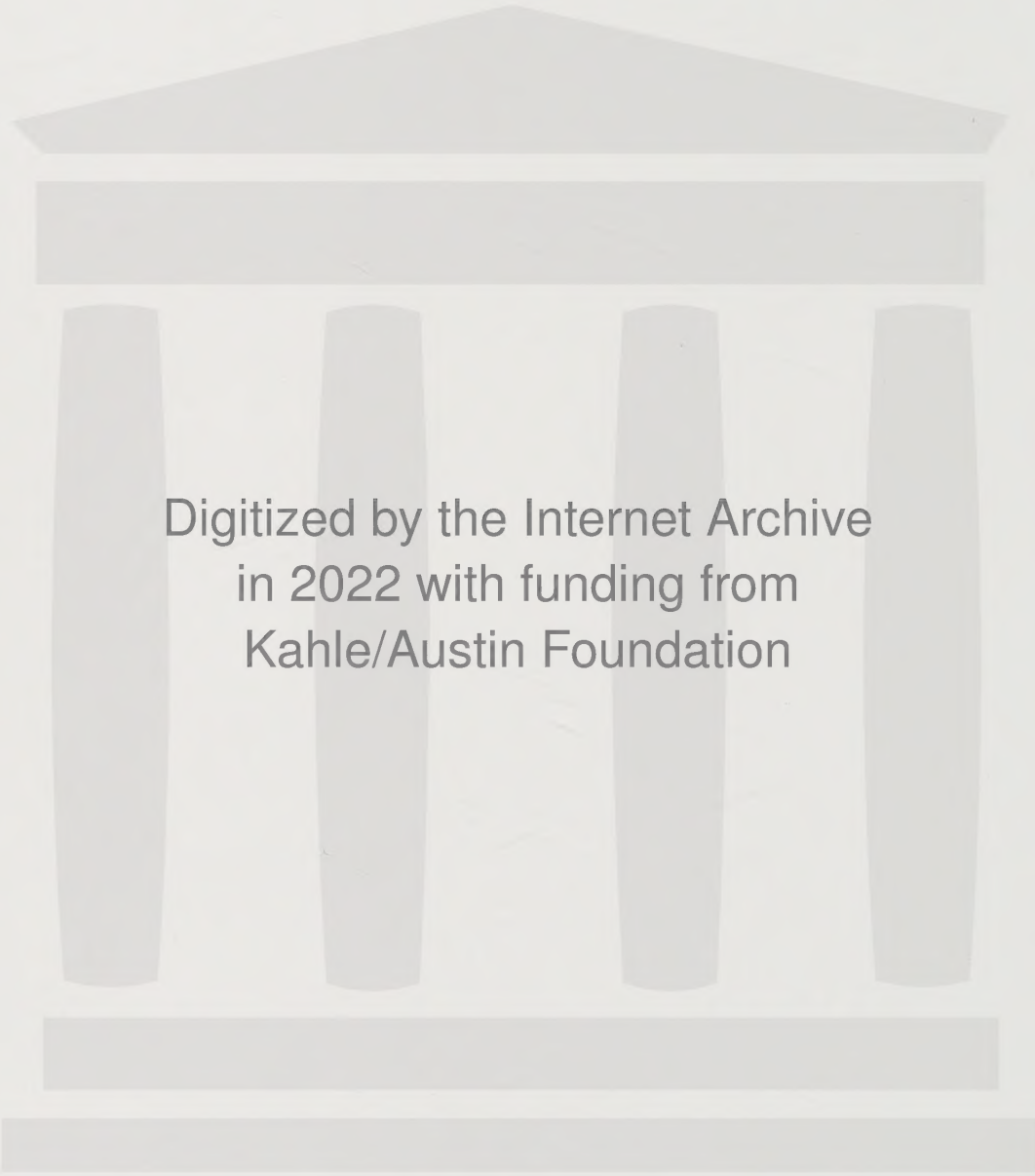
A-Level

**Exam
Success
Guide**

Economics Essays

Robert Nutter

- Advice on essay technique
- Understanding the question
- Answers with supporting commentaries
- Supplementary practice questions
- Coverage of key syllabus topics



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A-Level

**Exam
Success
Guide**

Economics

Essays

Robert Nutter

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I ntroduction

These essays are intended to be useful for learning, revision and examination technique. Essays are often the most important part of A-level Economics papers, yet, typically, students' efforts suffer from three fundamental weaknesses: poor examination technique, poor subject knowledge and poor writing technique. This book aims to remedy those weaknesses by offering a practical guide through the logical stages of answering typical exam questions set by the major boards.

Each question in the book is analysed to identify exactly what the examiner is looking for and to show you how to maximise your marks. There is commentary on the structure and strengths of the answer and advice to alert you to common failings and pitfalls. At the end of each essay other questions on the same area of the syllabus have been set to help you think flexibly about the topic and the answer provided. They also provide an opportunity to practise the skills you have learned.

The essays in this guide provide succinct summaries of key topics in the A-level syllabus, making them helpful for revision. However, the collection is by no means exhaustive and many other specific questions could arise in the actual examination. Furthermore, these essays have not been written to be memorised and repeated in the examination – they should not be seen as model answers.

Essay Writing Technique

The problem with essay questions in examinations is that they require a long response to a fairly short question. Quite often the question will be just one sentence, whereas the answer may run to 800 or 1,000 words. Your main task is to work out the real meaning of the question set, and this may not be immediately apparent. You then have to structure a response, guided by clues in the question, selecting appropriate evidence and balancing the arguments before coming to a reasoned and viable conclusion. Reading the question carefully at least twice is a good idea because you will recognise the key words in the title and give yourself more time to decide whether you want to do the question or not. Questions which look easy on first reading are often quite difficult, and vice versa.

An essay plan is very important even under the time pressures of an examination. You are marked on quality not quantity, and drawing up a quick plan gives you time to think and structure your answer. You cannot afford to waste valuable time on irrelevancy; it is important to stick to the question set. Many essays are structured with mark allocations for each part. The time you spend on each part should reflect these mark allocations. Remember to use precise definitions and relevant economic theory wherever you can. Make sure your essay is suitably brought together in a conclusion which adds something to what has already been written. With, perhaps, four essays to write in three hours, make sure you divide your time equally between each essay, however strong the temptation to write more on one of your favourite topics.

In an examination you will never be asked: 'Write all you know about monopoly.' Essay questions will have various command words which help to guide you towards the content of your answer. It is much more likely that a question on monopoly will look like this:

- (a) **Explain** why monopoly results in market failure. (10)
- (b) **Discuss** the view that all monopolies do more harm than good in an economy. (15)

You will need to become familiar with these key words in the essay questions, as they give you a guide as to what the examiners are looking for. Other 'key' or 'command' words are **evaluate**, **to what extent**, **assess**, **analyse**, **compare and contrast**, and **describe**.

Key words such as **list** and **define** require a fair proportion of factual explanation; words such as **state** and **what** may also require a good deal of explanation. A key word such as **discuss** is asking for a whole collection of things – it often follows a quote in a question. For example: "Inflation is solely a monetary phenomenon." Discuss. This is a controversial statement and it is extremely important for you to realise that the examiners do not want you just to agree with it! They are looking for more than just agreement or disagreement. They want reasons, facts, arguments and a conclusion. The conclusion must reflect the facts and arguments presented in the main body of your essay.

Remember, **define** and **describe** involve much more straightforward factual recall, whereas **assess**, **analyse** and **contrast** test higher-order skills. This often means that the latter carry higher marks in an examination. Very often in two-part essays **define** is a key word in part (a) while **discuss** or **assess** is a key word in part (b), the latter carrying more marks because it is more challenging.

Revision Hints

Although you should make your own rules for revision, here are a few pointers which may prove helpful:

- Make sure that you have done some work in the first place. You need to have gone some way towards learning a body of knowledge which you now have to organise.
- Physically organise your files of notes. This will help you to clarify what needs to be done. Organise your notes so that they correspond with the structure of the syllabus and the exam papers.
- Make sure that you have the right environmental conditions for studying – a quiet room, a large desk, a bookshelf, etc.
- You could follow the PQIRST method. This stands for:

P	Preview	–	read the material quickly.
Q	Question	–	ask yourself relevant questions.
R	Read	–	read the material again more thoroughly.
S	Self-recite	–	repeat it to yourself or write notes.
T	Test	–	test your recall.
- Try to make your revision as active as possible, rather than just sitting there staring at reams of notes. Don't let yourself become bored – do something! Do not think that memorising facts

is beneath you because it is a repetitive exercise – on the contrary, once you have internalised a body of knowledge, you can then become creative in manipulating it.

- Make sure you have a copy of the syllabus and that you are familiar with its contents. It is quite probable that the syllabus will be structured into different topic areas. The examination papers, too, are likely to reflect this structure. As you work through your course and as you do your revision, you'll be able to 'check off' those parts of the syllabus that you have covered. You will then know that you are making relevant progress.
- Make sure that you have copies of past examination papers. Be sure that you are familiar with the 'rubric' – the instructions. If you know this really, really well, it will save you valuable time in the exam having to interpret the 'Answer ONE question from Section A and THREE questions from Section B' bits. Get to know these exam papers well. For one thing, this will make it less frightening when you see your own A-level papers! Look for patterns in past exam papers and notice how they relate to the syllabus.
- Test yourself. Apart from the class tests and mock exams, write test essays at home. If there are, say, ten topics in a subject you want to be good at, then organise your notes appropriately and set yourself a timed essay on a topic. Give it to your teacher for comment. You will learn a lot from this process, because it makes you think about how to write down the material in the form of an essay. At the very worst, you'll discover that you don't know the subject as well as you thought you did, in which case you'll need to go back and read it again.
- If you work well with other people, then find a friend with whom you can have brain-storming sessions. If you are naturally competitive, then you will not want to be out-done by them! But don't let them make you do all the work and become their surrogate teacher – it has to be a two-way process.
- Draw up a timetable of revision. Start your revision early, so that you have plenty of time before the exams. Set yourself targets – targets that are achievable, as it is very disheartening to be always falling short of what you had intended to do.
- If you organise your work properly, you will still have time for a social life. Make the most of the time you allow yourself for relaxation – make it quality time, rather than just getting square-eyed in front of the television. Don't become a complete workaholic, as you will need social skills as well as study skills in your journey through life. If you go on to University, you will discover that it has as much to do with social activity as academic learning.

**A-Level
Economics:
Essays**

microeconomics

- (a) Distinguish between free goods and economic goods. (5)
- (b) Discuss the significance of opportunity cost to the economist when dealing with the problem of resource allocation. (20)

Tackling the question

Many A-level essays are now split into at least two parts. Normally the mark distribution is clearly shown and you must always try to divide your time carefully in proportion to the number of marks available. In this particular essay the first part is only 5 marks out of 25, so don't spend too long on it! Very often the first part of a structured essay is asking you for clear definitions testing your **knowledge**. The second part tends to test your ability to apply your knowledge when **analysing** a particular issue. This means reading the question very carefully so that you **select** material from your knowledge that is **relevant** to the answer required.

Answer

(a) Any economic agent, be it an individual, a firm or a government, has to exercise choice when making a consumption or production decision. Choice is exercised since, at any one time, economic resources (the means of production) are limited in supply and these scarce resources have alternative uses. Very few goods are free in the sense that they are gifts of nature or that their consumption and production incur no sacrifice of an alternative. Air and sea water are examples of 'free' goods, because nothing has to be given up in order to satisfy consumers' wants to the point of satiety – there is not a problem of supply scarcity. However, such goods exist only under carefully defined circumstances.

(b) Although the supply of air and water are gifts of nature, the supply of fresh air and water may involve the use of scarce economic resources and, hence, involve a choice between devoting resources to supply fresh air and water and devoting those same resources to the production of something else. Since the list of alternatives that could be produced is extensive, economists narrow this list to the

Guidance notes

For five marks keep explanations concise – remember to use examples. If a product is free at the point of consumption, it is not necessarily free in the economic sense.

next best alternative that is available. Thus they measure the **real** cost of an economic choice in terms of the next preferred alternative production **not** created, and refer to this as the **opportunity cost** of production or consumption. Opportunity cost is, therefore, a concept which only arises in the production and consumption of **economic** goods.

Those goods which are scarce (exchanged for money or valued in money terms, i.e. have a price) are economic goods and can be readily divided into consumer and producer goods. Thus, whilst air and water are free goods, fresh air and water are economic goods because they incur an opportunity cost. Some economic goods, however, may be supplied at zero prices, i.e. they can command a price but are supplied, for some reason, free; nevertheless, their consumption and production incur an opportunity cost.

In most circumstances, prices reflect opportunity cost if no market imperfections exist (e.g. no monopolies), or there is no divergence between social and private costs and benefits. Hence market prices and private opportunity cost both reflect social opportunity cost. If distortions do exist then private opportunity cost may diverge from social opportunity cost. The significance of this divergence will be discussed later but, before that, it is useful to illustrate diagrammatically the concept of opportunity cost in the allocation of scarce resources which have competing uses. The most familiar illustration is the Production Possibility Curve (PPC), shown in Figure 1.

This is an essential diagram! Think how versatile the PPC is in economics! Why is the PPC usually concave to the origin?

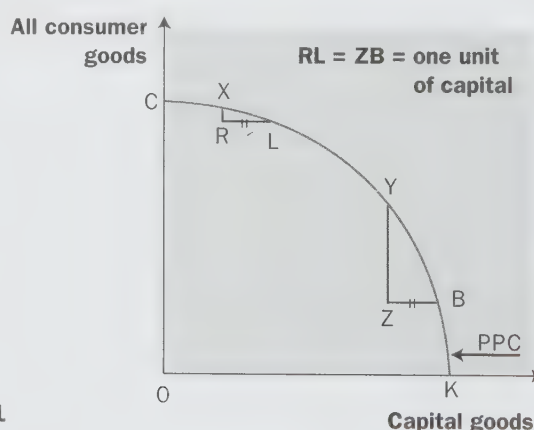


Figure 1

The PPC, or transformation curve, is drawn on the assumption that the nation has, at any one time, a limited stock of economic resources, i.e. economic resources are scarce. The community must decide how to allocate these resources between competing uses. Because of the limitations of two-dimensional diagrams, we will assume that society faces a choice between the production of consumer goods (of which, in practice, there will be an extensive range) and the production of producer (or capital) goods.

Given a fixed state of technology, the PPC indicates that, if all resources are devoted to the production of consumer goods, a maximum production of OC is possible. Conversely, if all resources

are devoted to the production of capital goods, a maximum of OK is possible. The economy can also produce any combination of consumer and capital goods along CK: for example, at point X. The curve is concave when viewed from the origin, which is due to the concept of diminishing returns in production and reflects the opportunity cost involved in economic choices.

Starting from point C, if society decided to devote some of its resources to increase the production of capital goods by one unit, the opportunity cost in terms of consumer goods given up is XR at point X, reflecting the relative abundance of existing consumer goods and the relative scarcity of capital goods. As we move along the curve towards point K, increasing the production of capital goods each time by an equal marginal amount of one unit, the opportunity cost of this additional production, in terms of the consumer goods given up, rises. For example, at point Y, the opportunity cost of an additional unit of capital is YZ units of consumption.

A similar conclusion would be reached if we started from point K and increased the production of consumer goods each time by one unit – the opportunity cost of additional consumption would rise as the nation produced fewer capital goods. The curve derives its shape from the fact that, as resources are transferred between uses (by marginal equal amounts), the increases in production become progressively smaller as resources encounter diminishing returns when they are employed in the receiving industry. Since the economy will probably not be at either of the extreme points C or K, but will be at some point on the curve between C and K, most economic choices are choices at the margin (rather than being mutually exclusive) and the opportunity costs involved in such marginal choices depend upon the existing allocation of resources. Thus, opportunity cost is a relative concept relating to marginal choices, and is illustrated by comparing points X and Y on the curve PPC.

A less obvious facet of the opportunity cost concept exists when allocating resources between capital goods and consumer goods. Although the curve measures the current consumption gained each time the production of capital goods is reduced by one unit (moving from K to C along the curve), we must also be aware that capital goods provide the means of producing a stream of consumer goods in the future. From society's viewpoint, the opportunity cost of increasing present consumption is the loss of future consumption that would have been available had resources been allocated to the production of capital goods. Because of the time difference between making an investment decision and receiving the benefits of that investment, it is necessary to discount these future consumption benefits; hence, the opportunity cost of present consumption is the (discounted) future benefit that would have arisen. It is, therefore, plausible to predict that a society allocating resources at point

The concept of opportunity cost is a key part of the answer. Keep using it in the text of the essay and both you and the examiner will be convinced that the question is being answered.

Y on the Production Possibility Curve will enjoy a higher growth rate and, by implication, a greater opportunity to enjoy a higher standard of living than if it allocated resources so as to produce at point X. The opportunity cost of the resource allocation at point X can be expressed, therefore, in terms of the (discounted) future consumption benefits sacrificed by not choosing resource allocation Y.

Such considerations would be important when discussing the rationale for state intervention in resource allocation. Some commentators have argued that, if individuals and firms (motivated by self-interest) are given complete freedom to make choices regarding the allocation of resources, such a resource allocation may not always ensure an optimal growth path for the economy. Individuals may naturally under-value any future benefits, given that uncertainty exists and that each person cannot be assumed to have equal ability to make rational judgements (because of ignorance, incapacity or lack of sufficient information). Since imperfections may exist in the process by which individuals (and firms) make decisions, we may consequently suffer from 'defective telescopic vision' and it is, therefore, the responsibility of the government or the planners to adopt a paternalistic attitude in order to correct this. Underlying this argument is the concept of 'social opportunity cost', where a government will take into account both the distant and the near future effect which a given choice may have on society's welfare.

To calculate net social benefit subtract private cost + external cost from private benefit + external benefit. This gives the net social benefit. The externalities should be given a monetary value, which is very difficult.

Such a wider and longer-term appraisal in order to establish the social opportunity cost is central to many investment and policy decisions taken by a government and would take the form of a 'social cost-benefit analysis'. Here both private and external costs and benefits would be listed and evaluated, with future costs and benefits 'discounted' to take account of the time difference between the initial monetary costs of a project and the resultant stream of net benefits (income minus recurring costs). In this way, the analysis would correct for market distortions and establish, by an objective set of rules, the 'social opportunity cost' of an investment decision.

Where resource allocation is primarily decided by the rational decisions of firms, each firm will be aware of the monetary cost involved but will not necessarily be aware of the opportunity cost. This divergence is important to economists because they are seeking to establish an objective rationale for decision making (the opportunity cost), whereas a firm is involved in the estimation of monetary cost (expenditure against revenues). An example will serve to illustrate this point.

Assume a firm wishes to expand the output of one of its products. This will involve the purchase of factor inputs (labour, capital and land) and diverting some resources from alternative production. The firm may have to use some of its retained profits in order to finance the initial purchase of new machinery and to keep

it running. The monetary cost is the sum of these expenditures (i.e. total cost = initial cost + operating cost). However, the opportunity cost (assuming no externalities or market imperfections) might take the following into consideration: the monetary costs (as above); the loss of profit from reduced alternative production as resources are reallocated; and the next best return which the initial capital expenditure could have obtained had it been used elsewhere by the firm or lent to someone else (which would be equal to the rate of interest).

It is clear that the concept of 'opportunity cost' involves the estimation of what is actually sacrificed by a firm when it chooses a particular course of action, and is a broader measure than 'cost' in the accounting sense. Where market imperfections and externalities exist, social opportunity cost becomes the real measure of economic choice and this diverges further from the narrow accounting measure of cost. Where a government takes collective responsibility for some part of resource allocation, this can be justified if based upon the objective principle of social opportunity cost, rather than on a dogmatic value judgement that the government knows better than the market.

Where private costs diverge from social costs, market failure exists. The view of some economists is that governments have a responsibility to correct market failure.

General comments

Remember that an understanding of basic concepts such as opportunity cost is very important. The use of production possibility frontiers in economics cannot be overestimated. This diagram can be used in many questions on such topics as opportunity cost, the balance between the private and the public sector and economic growth.

Related question

- (a) What is meant by factor mobility? (10)
- (b) Discuss the importance of factor mobility to an economy. (15)

Essay 2

- (a) What do you understand by the terms:
- (i) microeconomics and macroeconomics; (5)
 - (ii) positive economics and normative economics? (5)
- (b) What is the importance of each concept to the problem of scarcity and choice? (15)

Tackling the question

This is another essay which is split into parts, with **clear definitions** very important in part (a). Students of A-level economics can earn full marks here if their knowledge is strong. There are many **dictionaries of economics** on the market – you would be well advised to buy one. In part (b) you have to apply your knowledge from (a) to the ‘economic problem’. Good students tend to mention the terms from the question repeatedly in their answers, so that the examiner is convinced that they are actually **answering the question set**. Ask yourself continually whether you are doing this.

Answer

These are definitions where it is quite possible to score full marks with a comprehensive answer. Make sure that you do not lose any marks by careless omissions.

(a) (i) **Microeconomics** is concerned with the study of parts of the economy. Examples of such studies include the individual as a consumer, the firm as a producer and a supplier, a particular industry or sector of the economy, goods markets and factor markets. **Macroeconomics**, on the other hand, is devoted to the study of the whole, the national economy and the world economy – it deals with such aggregates as national income; saving, consumption and investment; employment and inflation; government expenditure and taxation; imports, exports and the balance of payments.

(ii) **Positive** economics refers to the methodology of economics and is usually explained as the economics of ‘how things are’: the identification and explanation of data and relationships based upon a verifiable and empirical approach. In contrast, **normative** economics are the economics of ‘how things ought to be’: they are value judgements and have a strong ideological basis. An example

of a positive economic statement would be that 'a firm maximises profit where marginal cost equals marginal revenue'. A normative statement would be that 'governments should be more concerned about curing inflation than about reducing unemployment'.

(b) The fundamental economic problem for all societies is one of unlimited wants and scarce resources, a dichotomy that necessitates choice and is often expressed in question form: what goods and services should be produced and supplied; how should they be produced; for whom should they be produced? These questions clearly involve consideration of decisions about the allocation and reallocation of resources; the choice of production methods and the combination of factors of production; the determination of factor prices and the distribution of rewards.

The four concepts referred to in the question all relate to these problems.

Microeconomics provides a basis for decision-making for individual consumers, producers and suppliers. Maximising theories and the concept of opportunity cost help decision-making about consumption (the equating of marginal utility with price) and about production (maximising profits by producing at that price/output level where marginal revenue equals marginal cost) and so on.

Macroeconomics is invariably more complex and provides an approach to, for example, government management of the national economy that involves choice between policy objectives. Thus, macroeconomics may attempt to show a relationship between the rate of inflation and the level of employment; between the level of economic activity and the balance of payments; between interest rates and the exchange rate; or between the money supply and inflation.

While both micro- and macroeconomics may operate at the level of hypothesis or theory, the positive approach to both seeks to provide verification and proof so that decision-making and choice at either level may be based upon given causal relationships. Positive economics seeks to provide evidence that, for example, a particular firm's pricing policy will have predictable consequences for revenue and profits; a measurable increase in public expenditure will result, via a known multiplier process, in a predictable increase in employment.

Normative economics introduces value judgements to economic decision-making and to the issue of scarcity and choice. It is a

Start with a clear introduction that sets out your approach. The reader will then see that you are genuinely attempting to answer the question set.

Make sure you acquaint the examiner with plenty of economics jargon where appropriate. Using well-known microeconomic terms in the answer can help a great deal in creating a good impression.

How far can statements on the beneficial effects of rises in public expenditure be classed as positive or normative in nature? A lot of macro-economics is normative. For example, 'the long-run aggregate supply curve is vertical' is a normative statement because Keynesian and monetarist theories disagree over this.

Can the use of economic modelling techniques be used to convert a normative statement into a positive one? Recently the Treasury model for the UK economy ran a programme to demonstrate the effects of the UK joining the single currency in Europe. It concluded that the effects would be broadly beneficial. So, is the statement that 'the UK would be better off as a member of the single currency' positive or normative?

normative proposition to argue that wealth and income should be distributed more evenly or to suggest that more resources should be devoted to public housing than to private housing. Many of the current arguments about macroeconomic policy are of a normative nature with some economists stressing the moral virtues of non-intervention in markets and others arguing for more public controls and regulation in the interests of social justice. The distinction between normative and positive economics is not as clear cut as it seems. Economic theories are not produced in a social vacuum and it is difficult to believe that any 'economics' can be value free and not ideologically determined.

General comments

Away from the basic definitions used in the above essay, more advanced issues arise here. The additional essays shown here give you an opportunity to investigate the philosophy of economics.

Related questions

- 1 How far do the terms 'microeconomics' and 'macroeconomics' have any relevance to modern economics? (25)
- 2 Is economics a science? (25)

Discuss the economic factors which you would consider to be important in determining the price of fresh vegetables

(i) in the short run; (12)

(ii) in the long run. (13)

Tackling the question

This is a question on demand and supply conditions in a particular market. Any question of this kind usually involves the use of diagrams and they must be used to good effect in an examination. **Well-labelled diagrams** which are relevant and blend well with the main body of the essay can be the key to a good mark. They break up the continuous prose of the essay, making it more attractive to the reader, and can demonstrate real understanding of complex issues. Bad diagrams, often used by chief examiners at student conferences to show how to lose marks, can colour the reader's impression of the whole essay. Remember to refer to your diagrams in the main text of the essay – don't leave them standing high and dry!

Make sure that you clearly divide this essay into the **two parts** asked for in the question – short run and long run. There is nothing worse for an examiner than trying to find where one part of an essay finishes and the other starts! Make sure that you end your essay with a **summary** which pulls together all your arguments.

Answer

Guidance notes

(i) The price of commodities, such as fresh vegetables, is determined by the interaction of demand and supply. When demand and supply are equal, the market is in equilibrium at that price and the market will clear. The amount which consumers want to buy is exactly what suppliers can willingly supply: there are no shortages and no unsold stocks on the market. In Figure 1, demand and supply curves intersect to give an equilibrium price of P with quantity Q . If, at the start of the day's trading, the price were set at P_1 there would be an excess of supply over demand of $(K - J)$ and the only way this

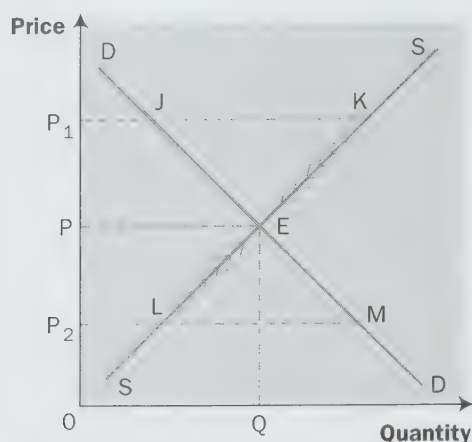


Figure 1

unsold stock could be cleared would be to reduce the price, a process which would continue until the equilibrium of demand and supply (E) was reached with price P. If the price were set at P_2 , demand would exceed supply by ML and there would be shortages at that price. The excess demand would bid up prices, and supplies would be increased until the equilibrium point E was again achieved with price P and quantity Q. Equilibrium price is therefore the price to which a market will always return in the short run, assuming that all other factors remain constant (*ceteris paribus*). In order to analyse the determinants of price over different time periods, however, we must look more closely at the market factors underlying demand and supply and how changes in them may affect price.

The demand for fresh vegetables depends not only on the price of vegetables but also on the price of substitute goods. The closest substitutes for fresh vegetables are frozen or tinned vegetables. Should there be a substantial rise in the price of frozen or tinned vegetables, then there will be substantial increase in the demand for fresh vegetables.

Remember to examine changes in both demand and supply. A shift in the demand or supply curve is a change in the **conditions** of demand and supply. However, a movement along these curves occurs only when there is a change in price.

In Figure 2, this is represented by a shift in the demand curve from DD to D_1D_1 , with equilibrium shifting to E_1 at price P_1 and quantity Q_1 . More is now demanded at each price. The reverse would be the case if the price of tinned or frozen vegetables fell; there would be a reduction in the demand for fresh vegetables as consumers' preferences switched to the commodity which had become relatively cheaper, in order to maximise their utility. A favourable shift in demand could come about by a change in consumers' tastes: for example, if consumers became convinced that fresh vegetables were healthier, a similar demand shift to that in Figure 2 could occur. Such shifts can also result from the influence of advertising on consumer preferences.

Supply is ultimately determined by cost, and the supply curve reflects the marginal production costs. At higher outputs, the farmer will need to employ more labour, use marginal land and more

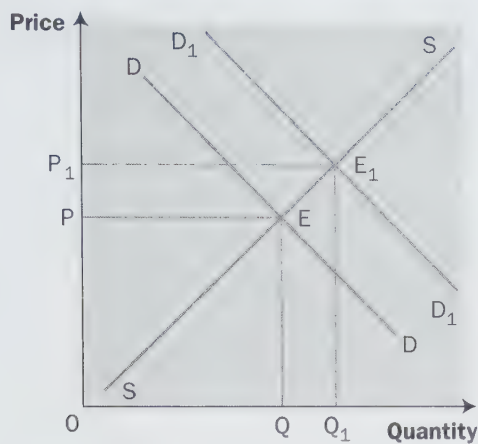


Figure 2

fertiliser. This will be done only if the higher costs can be recovered from a higher price. In the short run, the farmer's costs may be affected by an increase in the cost of factor inputs, such as labour or fertilisers. Fresh vegetables will, however, be prone to short-term fluctuations in output due to factors such as adverse weather and crop failures (such as blight). In addition, most vegetable crops are seasonal in character and will be prone to periods of glut and shortage. Poor weather or crop failure due to any other reason will have the effect of drastically reducing supply and hence causing higher prices. In Figure 3 the failure of a crop has resulted in a shift in equilibrium to E_1 (at price P_1 and output Q_1). Price is higher and output lower. Such short-term supply characteristics lead, therefore, to shifts in price and output, resulting in a new short-term equilibrium price. These price fluctuations will also tend to be more pronounced because of the general tendency of demand for commodities, such as fresh vegetables, to be price inelastic.

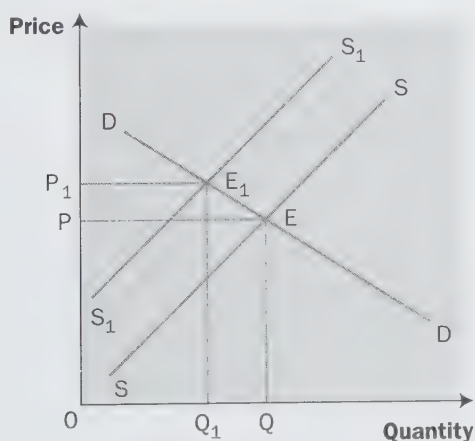


Figure 3

(ii) The long run is the period in which all factors of production, fixed and variable, can adjust themselves to a new market situation. The time period involved will vary from industry to

Define the long run! Normally labour is the only variable factor in the short run.

These are three important diagrams. The three time periods will vary depending on the type of product. Contrast the supply elasticity of Mars Bars with that of 12-year-old Scotch whisky.

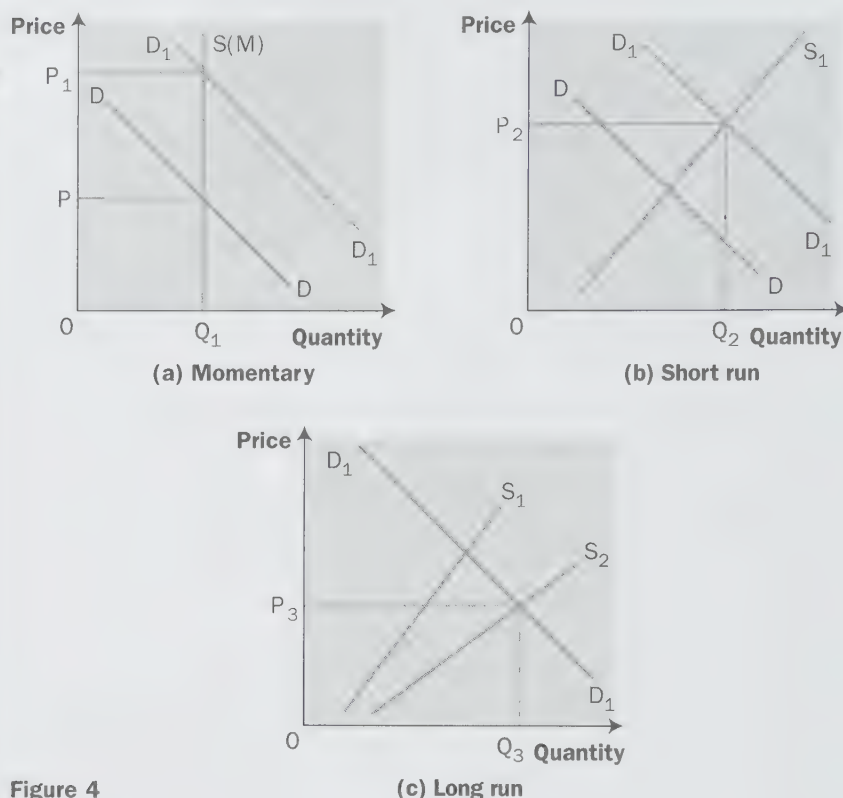


Figure 4

The three time periods relevant to supply are the momentary, the short run, and long run. In Figure 4(a) there is an increase in demand from D to D_1 ; but, in the momentary period, $S(M)$ supplies are fixed and price rises from P to P_1 ; supply is perfectly inelastic. After a period of time, however, supplies expand as variable factors are used more intensively; short-run supply is more elastic and price is P_2 , which is lower than in the momentary period. In 4(c), both fixed and variable factors have adjusted to the long-run situation and the productive capacity of the industry has been expanded by new farms entering into production of vegetables and existing farms expanding acreage and using more machinery. Price has fallen to P_3 and there has been a subsequent expansion in the quantity demanded. Whether the new price P_3 is higher or lower than the original price P depends upon how easily the industry was able to attract the extra factors of production which it required for expansion, and the extent to which the industry was able to gain economies of scale.

In summary, long-run prices will depend upon the changes that take place in demand conditions, notably incomes and consumer

In the short run the concepts which are applicable are increasing and diminishing returns to a factor (usually labour) whereas the long run is associated with economies and diseconomies of scale.

preferences for fresh vegetables as opposed to substitutes. On the supply side, future profit prospects will influence farmers' willingness to supply, as will trends in costs, which will be related to the rate of technological change and the price of factors such as labour and capital.

General comments

The behaviour of price and quantity in agricultural markets is a popular topic for questions in examinations – not only because it tests knowledge of elasticity of demand and supply, but also because it can be applied to real world situations. The most common area of practical application of these concepts is the Common Agricultural Policy (CAP) of the European Union. An up-to-date knowledge of the latest reforms of the CAP is essential for an A-level economics student.

Related question

- (a) What were the original objectives of the CAP? (8)
- (b) Identify the problems that the CAP has faced in recent years and how the EU has attempted to overcome these problems. (17)

Essay 4

The former command economies of Eastern Europe such as Hungary and Poland have recently been placing more reliance on market forces. Examine the likely economic benefits and problems arising from this changed situation. (25)

Tackling the question

Essays of this type are now quite common in A-level papers. The changing situation in Eastern Europe means that being up to date is crucial if a successful answer is to be attempted. Indeed the essay here cannot hope to convey fully the present situation in Eastern Europe because of the differences in progress made not only by the different countries but also by different regions within those countries. An essay plan has been prepared below to demonstrate how an essay of this kind can be tackled.

Essay Plan

1. Economic reform in Eastern Europe has been prompted by:

- sluggish growth of the economy;
- the failure of planning;
- shortages;
- decline in the share of world trade.

2. **Likely economic benefits**

The free market system is allocatively and productively much more efficient than the command economy.

List and explain the economic benefits of the free market system.

3. **The problems**

Those of transition. Comment on the changes which are necessary to transform the economies of Eastern Europe from planned to mixed economies with significant private sectors.

4. Outline the problems which have arisen as a result of economic reform.

Answer

The economic changes which are taking place in Eastern Europe were largely prompted by a political initiative taken by President Gorbachev in the Soviet Union. It was evident that the Soviet and East European economies were languishing and compared most unfavourably with the economies of first world countries such as the

USA, Germany and the UK. GDP per head (a measure of economic welfare) in the Soviet Union was less than one-third of that of the USA and less than half of that of Germany immediately before the programme of perestroika was introduced. GDP per head in Romania was about one-tenth of the USA. President Gorbachev's policy of perestroika (restructuring of the economy), combined with a rejection of the military coercion of the countries of Eastern Europe, led to political upheaval and economic reform in those countries.

The lacklustre performances of the centrally planned economies were the result of the rigidities and inefficiencies of the planning process. Excessive rates of investment and defence expenditure were planned which overstrained the economic capacities of the countries, creating bottlenecks and delays. Planners approved the wrong projects, favouring heavy industry above other sectors. As a result, the economies had poor trade potential.

Shortages of food and consumer goods were endemic. Price controls, introduced to reduce inequality, led to excess demand, which meant that consumer goods disappeared from the shelves. Lack of adequate price signals meant that planners had to guess, usually incorrectly, at the pattern and strength of consumer demand. Excess demand meant that producers were able to sell all they produced without making the effort to innovate and improve quality.

Economic reform in the Soviet Union and in Eastern Europe aimed at the gradual introduction of free markets and the operation of the price system as a means of efficiently allocating resources and producing goods and services. Prices act as signals indicating the relative strengths of demand. Rising prices choke off excess demand and at the same time encourage increased supply from entrepreneurs who seek to maximise profit.

Freedom of entry to and exit from the market mobilises resources and promotes allocative efficiency and competition. Competition encourages improvements in quality and choice for consumers. It also encourages trade.

Despite the advantages of economic reform and the encouragement of enterprise, Russia and the countries of Eastern Europe have encountered serious problems of transition. All economic change creates problems, which are the result of rigidities in attitudes and the lack of mobility of the factors of production. A review of the reforms necessary to introduce free market practices also highlights the attendant problems.

A necessary feature of a free market economy is the private ownership of property. This is absolutely necessary to the decentralisation of decision making and the pursuit of private profit. The privatisation of property and production has created enormous problems. Russia and the countries of Eastern Europe lacked the financial infrastructure to carry out the transfer of property from the state to

Give some background to the problems of Eastern Europe under the command economy system. This shows that there was major scope for change by the early 1990s.

Eastern Europe recognised the need for change and enjoyed freedom of expression or openness (glasnost) to state what was wrong. The restructuring of these

economies (perestroika) would be much more difficult and take some time.

The problem of making reform effective in Russia has been made more difficult by the system of collective farms, which were a key part of the Soviet system under communism.

Many Eastern European economies have made enormous progress in recent years, particularly Hungary and the Czech Republic. However, even Eastern Germany, which has had a lot of help from the West, still has massive unemployment problems. Countries such as Bulgaria and Romania as well as some of the old Soviet Republics are likely to have a long transition from the command system.

individuals. They lacked stock exchanges, issuing houses and joint stock companies. They lacked an investing middle class and financial institutions such as insurance companies and pension funds which play such an important part in the trade of stock exchanges and the transfer of shares and stocks in Western Europe and America. Russia had to resort to the issue of vouchers to the whole population which could be used to buy shares in non-strategic industries, or sold to dealers. In Moscow, apartments were given to their tenants. Elsewhere, small businesses were put up for auction.

The efficient allocation of resources in a free market system depends on the free movement of prices to reflect the changing currents of demand. In Russia, the abrupt freeing of prices caused great dislocation. Goods which had been in short supply rocketed in price, and although this had the effect of filling the shelves in the shops and increasing choice, many poorer people simply could not afford to buy what was on offer. Many older people were on fixed state pensions, which as a result of large rises in prices became virtually worthless.

In the long run, increased competition amongst producers should bring down prices, but the managers of firms were ill-prepared to innovate and compete. They had no experience of fighting for their share of the market. They were used to a system where targets were set by the planners and production was not subjected to cost efficiency. The knowledge of commercial business practice was limited and concepts such as profit and loss accounting, marketing, project evaluation and advertising were not well understood.

Many firms had previously depended on tax concessions and subsidies to produce goods at a reasonable price. The abolition of these supports meant that many faced bankruptcy and closure, and workers became unemployed. The dismantling of the system of planning meant a huge reduction in the bureaucracy and a great increase in unemployment.

Before the programme of economic reform had been introduced, foreign trade had been closely controlled by the governments of the Soviet Union and the countries of Eastern Europe. All trade agreements were negotiated by the bureaucrats and the exchange values of their currencies were determined by them. The freeing of trade has created more problems. Competition from abroad has exposed the inefficiencies of many firms, which has led to their closure and to an increase in unemployment. In sectors where they can compete, such as agriculture and textiles, countries of the European Union are reluctant to accept their exports because of the threat they pose to EU industries.

The economic turmoil introduced by the reform process has led to much opposition in the countries of Eastern Europe and also to an increase in social problems and crime. These problems are outside the boundaries of this account, but they help to illustrate that although economic change may have long-term benefits, it certainly produces short-term pain.

Extremes of wealth and income have emerged with the rich getting richer. Many Russians who remember with nostalgia the benefits of communism dislike the enterprise culture introduced by Boris Yeltsin.

General comments

The problems of Eastern Europe will tax economists for some time. It is important to remember the wide differences in economic progress made over the last few years across Eastern Europe. For example, Hungary and the Czech Republic have made such progress that they are on the brink of EU membership, while countries such as Romania, Bulgaria and some of the old Soviet Republics are still facing immense economic difficulties. Nonetheless it is hoped that these former command economies will have made sufficient economic progress by the early part of the twenty-first century to join the Single Market of the EU.

Related question

'Most countries have a mixed economy, the only debate is about the strength of the mixture.'
(Sir Alex Cairncross)

- (a) What is meant by a mixed economy? (8)
- (b) Examine the above statement with respect to the problem of determining what should be the 'strength of the mixture'. (17)

Essay 5

- (a) Explain how a buffer stock scheme can be used to stabilise price in an open market. (10)
- (b) What difficulties arise in stabilising price and producers' incomes using a buffer stock scheme? (15)

Tackling the question

Buffer stock schemes are common in agricultural markets and useful in applying the principles of demand and supply to the real world. This is a challenging essay, particularly in the accurate drawing of appropriate diagrams. The key words in part (a) are **to stabilise price** and in part (b) **what difficulties arise**. It is very important to bear in mind these key phrases when writing the answer. Plan it all out first, including **rough drawings of the diagrams**.

Answer

Explain why you have drawn vertical supply curves. In agricultural markets supply is perfectly inelastic in the short run because the long growing periods mean that supply cannot rise suddenly as it can with a manufactured good.

(a) The objectives of a **buffer stock** scheme are to stabilise prices and/or the incomes of producers in markets which might otherwise be characterised by cyclical or seasonal fluctuations. The scheme is operated by a central authority which enters the market as a central buyer or seller. Assuming that the intention of the scheme is to stabilise price, the authorities must be able to forecast what the average free market price would be in order to establish its 'target' or 'support' price (T in Figure 1). If the market supply in year 1 is represented by S_1 (production is assumed to be fixed in any one period for ease of analysis), the free market price would rise to P_1 , given prevailing demand conditions. To prevent this, the central authority enters the market and releases $(Q - Q_1)$ supplies to the market from its buffer stock, such that the supplies to the market are sufficient to establish the support price. In year 2 if production is S_2 , the free market price would fall to P_2 . To prevent this, the central authority enters the market as a central buyer and purchases $Q_2 - Q$, adding these to its buffer stock.

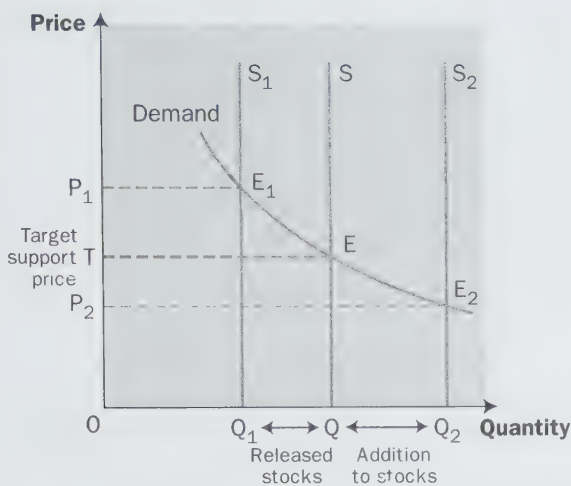


Figure 1

(b) Four difficulties in establishing a successful buffer stock scheme can be discussed:

- (i) estimating the average free market price in order to establish the support price – unless this is an appropriate price, central purchases and sales will not cancel out over time; hence
- (ii) if the target price is above the free market price, stocks will build up. The costs of maintaining such stocks may become expensive, e.g. warehousing, refrigeration, deterioration, interest charges;
- (iii) administration costs for the scheme will have to be met by taxpayers and, if price is set above the equilibrium market-clearing level, consumers' surplus is reduced. This may be regarded as a direct income transfer from taxpayers and consumers to producers;
- (iv) it is clear that establishing the target price cannot guarantee the stability of producers' output. Furthermore, neither can a target price automatically guarantee any stability of producers' income. For example, if normal production is Q , producers' income is $T \times Q$ and there is no need for intervention. If, however, production in year 1 falls to Q_1 , producers' income falls correspondingly to $T \times Q_1$, despite the operation of the buffer stock, which releases $Q_1 - Q$ to the market if the target price T holds. Thus, producers' income would be lower than the level which would exist if price were allowed to fluctuate (since $OP_1 \times OQ_1$ is greater than $OT \times OQ_1$).

Listing in this way can have the advantage of clarifying to an examiner that you are answering the question. Each point is clearly distinguishable from the others. But be careful not to let essays descend into notes.

With a unit elastic demand curve, whatever the price the total revenue will remain the same. This means that income for farmers is the same at any price. Perfectly elastic and perfectly inelastic demand curves are similar to unit elastic ones because price elasticity of demand is constant along the entire length of the demand curve.

The only way that the authorities can maintain the income gained by producers at the normal level of demand and supply (represented by area OTEQ) is for the demand curve faced by producers to be artificially adjusted so that price elasticity of demand is made equal to unity. If elasticity is unitary, the total area under the 'intervention curve' (which represents producers' income) remains constant – this curve would be drawn as a rectangular hyperbola through the normal equilibrium position E (see Figure 2).

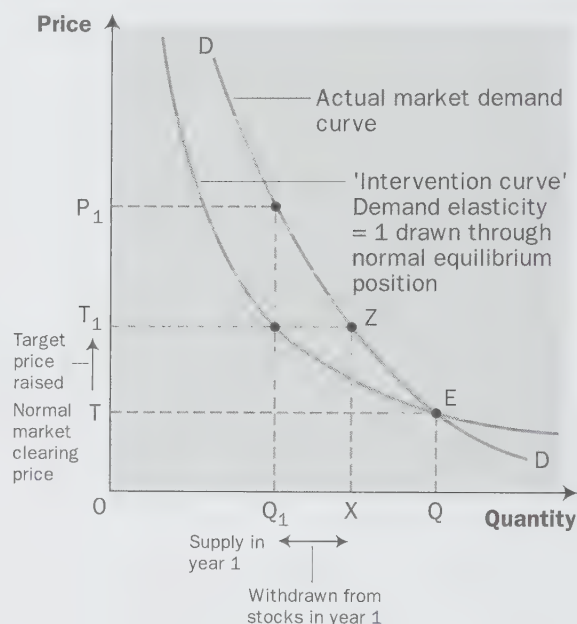


Figure 2

If we now superimpose the normal demand curve for the product (DD), we can estimate the changes in the buffer stocks needed to maintain normal market demand. For example, in year 1 with actual production at OQ_1 , the target price would have to rise to OT_1 (read from the intervention curve) in order to maintain producers' income (since $OT_1 \times OQ_1 = OT \times OQ$). However, consumer demand is OX at this price (read from the normal demand curve, point Z). Hence, the authorities will have to release $X - Q_1$ from their buffer stocks in order to meet normal market demand.

Note also that, although consumers must pay a higher target price (OT_1) in order to consume quantity OX, the target price is still below the market price that would have been paid (OP_1) had the buffer stock scheme not been operated, given that actual production in year 1 was OQ_1 . Hence a successfully organised buffer stock scheme can reduce price fluctuations as well as maintain producers' income.

However, the difficulties outlined earlier pose enormous problems for a central authority administering such a scheme. The problems faced by the Common Agricultural Policy (CAP) in the EU are evidence of this. The butter mountains and wine lakes that were created in the last 20 years have led to partial reform, moving away from price support to farmers towards income support.

Bring in the difficulties at the end and apply them to the CAP. Theoretically price support may work, but experience of the CAP suggests big difficulties in the administration and cost of such schemes.

General comments

One of the main points to remember about agricultural products is their inelasticity of demand and supply as compared to manufactured goods. Questions often test this and also the fact that agricultural goods have a very low income elasticity in most cases. Price elasticity of supply varies significantly between the short run and the long run, being elastic in the former and inelastic in the latter.

Related question

- (a) Explain why the price elasticity of supply of agricultural goods is usually lower than that of manufactured goods. (12)
- (b) Why are agricultural goods often subject to major fluctuations in price? (13)

Essay 6

Explain how (a) minimum prices and (b) maximum prices affect conditions prevailing in a market.

Tackling the question

In questions of this kind, where the mark allocations are not shown, assume that the marks are equally split between parts (a) and (b). Remember to show the point where (a) finishes and (b) starts. This question tests knowledge of both **consumer** and **producer surplus** and also the **welfare loss** resulting from government intervention in markets. Again the use of diagrams is very important, as is their detail. In cases like this the **diagrams need to be large enough** to convey the information clearly. Sometimes diagrams are drawn too small and marks are lost.

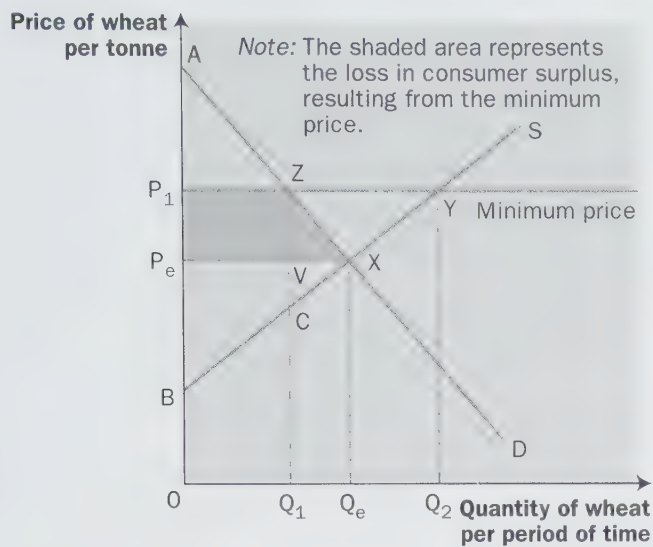
Answer

Define minimum prices! The use of minimum prices is very important in agricultural markets, where prices tend to fluctuate quite significantly. With demand growing slowly, a big rise in supply caused by a bumper crop could send prices tumbling in a free market with no protection for producers.

(a) A guaranteed price for a good such as wheat can be regarded as a minimum price. This occurs where an authority, usually a government agency, will not allow the price to fall below a set level (known as the floor price). The policy is often backed up with legislation. A key motive for minimum price controls is the transfer of income from consumers to producers. However, if the minimum price is set at or below the free market equilibrium price, then there will be no effect since the control only provides a lower limit, not an upper one.

It is more likely that a minimum price will be set above the free market level, the effect being to increase wheat prices to consumers and cause an overproduction of wheat. This is illustrated in Figure 1, where initially the equilibrium price is OP_e and the quantity sold, OQ_e . A minimum price of OP_1 is then imposed and this causes a contraction in demand to OQ_1 and an expansion in supply to OQ_2 . The difference between OQ_1 and OQ_2 is the excess supply of wheat.

The minimum price control also reduces the consumer surplus (the difference between what consumers are prepared to pay for wheat and what they actually pay) from the area AXP_e to AZP_1 . Part of this loss is transferred to farmers, who receive an overall increase in producer surplus (the difference between the price farmers are



Make sure that the letters are clearly marked at the right points on the diagram. Explanations from the main body of the essay are meaningless if there is no clear connection with the diagram.

Figure 1

prepared to supply wheat to the market for, and the price they actually obtain) from BXP_e to $BCZP_1$. However, part of the loss (VXZ) is not passed on to the farmers and so represents an overall welfare loss to society, indicating an inefficient side-effect of the minimum pricing policy.

Without further government intervention to purchase the excess production, some farmers will be tempted to sell wheat at a price below the legally set minimum. If the government purchases all the excess production of wheat then it will incur an expenditure of Q_1Q_2YZ and total revenue for wheat farmers increases to OQ_2YP_1 (from an initial area of OQ_eXP_e , before the implementation of the price control).

If the minimum price is maintained for a number of years, the likely outcome is a wheat mountain, causing the variety of problems experienced with guaranteed minimum prices under the Common Agricultural Policy of the European Union. The problems include, for example, extra costs of transportation, storage and security for the grain. An even greater cost is the direct subsidy to wheat farmers, which has to be met from government funds, through increased taxation, borrowing or a reallocation of its expenditure. Each option has its own difficulties: higher taxation is unpopular and tends to reduce consumer disposable incomes; increased borrowing will tend to exert an upward pressure on interest rates and so discourage investment; a reallocation of government expenditure means cuts have to be made elsewhere in its programmes. Thus, a minimum price accompanied by wheat subsidies has an opportunity cost – the highest-value alternative goods and services which could have been produced but were forgone.

Another issue arising from the surplus is deciding what to do with it. The government may be tempted to sell it at rock bottom prices to East European economies (dumping), or give it away free

to developing countries. However, the issue is not as straightforward as it appears, since the knock-on effects could be harmful in weakening the domestic agricultural sectors of these countries, which may find it impossible to compete with free wheat. (On the other hand, if the alternative is famine, then clearly the wheat surplus should be distributed on humanitarian grounds alone.)

There could be further effects of a minimum price: namely, the protection of employment and output in the wheat-growing regions. If the alternative is higher unemployment among the wheat-growing communities, then the government will have saved expenditure on social security benefits whilst maintaining tax revenues from those still in work.

(b) A maximum price control on a good such as milk occurs where the government will not allow its price to exceed a set level (known as the ceiling price). Often, the policy is backed by legislation to this effect. Generally, there are two different motives for the imposition of maximum price controls: firstly, to redistribute income to the less well-off, though this will largely depend upon the method chosen for allocating the good (this will be discussed later); secondly, to restrict production in order to release resources for more pressing needs, such as munitions production in time of war. The latter motive has been highly successful in limiting consumption of particular products.

If the maximum price for milk is set at or above the free market equilibrium price, then there is no effect since the control only provides an upper limit, not a lower one. However, it is more likely to be set below the market price, so causing an excess demand for milk. This is illustrated in Figure 2, where initially, the equilibrium

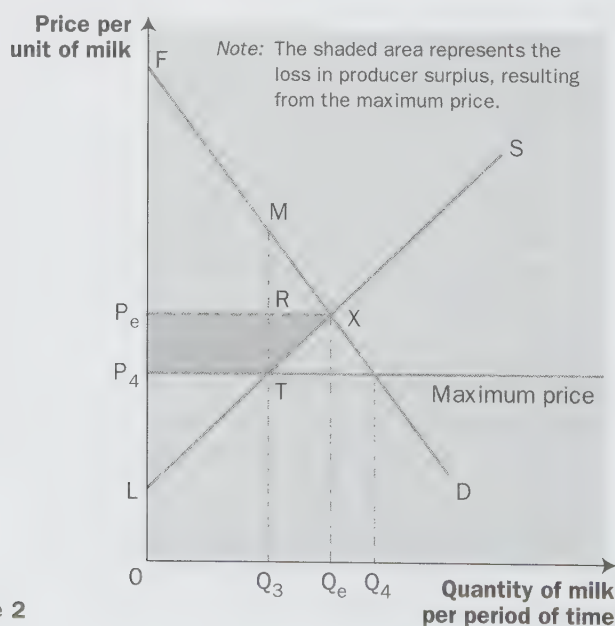


Figure 2

price is OP_e and quantity sold per period, OQ_e . A maximum price of OP_4 is then introduced, which leads to an expansion in demand to OQ_4 , and a contraction in supply to OQ_3 . The difference between OQ_3 and OQ_4 is the excess demand for milk.

The maximum price control is likely to increase consumer surplus as shown in Figure 2, where it rises from P_eXF to P_4TMF . Part of the gain comes from the milk farmers, who experience a fall in producer surplus from P_eXL to P_4TL , but part of this, RXT , is not passed on to consumers, representing a welfare loss to society and indicating an inefficient side-effect of the policy.

A major outcome of the maximum price control on milk concerns its allocation. The excess consumer demand is likely to lead to the development of a black market, where some milk farmers are tempted to sell above the ceiling price (a black market is one where goods are sold at prices which violate the legal restriction). Moreover, some consumers will be prepared to pay the higher price in order to ensure their own consumption of the good. This outcome runs counter to the intention of making it easier for low-income groups to consume milk.

The allocation of milk could also be carried out through queuing on a first-come, first-served basis, probably taking the form of long lines outside the point of sale. Alternatively, the suppliers could sell milk according to their own preferences, which may include family, friends and regular customers.

A more equitable way of allocating the milk is by government rationing, similar to that experienced in the UK during World War Two. Here, the government issued ration books to households according to their own personal circumstances. The book contained coupons which were exchanged, along with payment, for basic foodstuffs. However, rationing is likely to be extremely unpopular during peacetime and would involve high administration costs.

A final possible outcome of the maximum price control on milk is concerned with its impact upon related markets. For example, consumers may transfer their pent-up demand to substitute products, which may include soya milk and soft drinks. Prices will tend to rise in these markets, encouraging an expansion in supply. Elsewhere, the fall in milk consumption may cause a decrease in demand for complementary goods, such as breakfast cereals. Prices will tend to fall in this market, leading to a contraction in supply.

Some milk farmers are also likely to switch their resources to more profitable related activities, such as butter, cream or cheese production. As a last resort they could invest in an unrelated area of farming, or even leave the industry altogether.

In more recent times, ration books were issued during the oil crisis in 1974 when petrol was in short supply. They were never used though.

A meaningful conclusion is essential to draw together the two parts of the essay, showing the link between the two pricing policies. Try not just to repeat points made earlier in the essay.

Maximum and minimum price controls are types of market intervention which have far-reaching effects, most notably, in the redistribution of income between consumers and producers and the creation of surpluses and shortages of products. However, it may be concluded that the outcome of each type of intervention will depend upon the nature of the market to which it is applied.

General comments

The concept of minimum and maximum pricing is not difficult and is covered at GCSE level. The A-level student takes the issue much further and the application of consumer and producer surplus shows the need to have much greater knowledge and understanding. Consumer surplus is an important concept and can be applied to other areas of the subject – for example, price discrimination.

Related question

- (a) Distinguish consumer surplus and producer surplus. (8)
- (b) Explain how consumer surplus is affected by different conditions prevailing in a market. (17)

- (a) Distinguish between price elasticity of demand, income elasticity of demand and cross elasticity of demand. (10)
- (b) Why may businesses and governments be interested to know the price elasticity of demand of products? (15)

Tackling the question

Part (a) is very straightforward and probably offers 3 marks for each elasticity. A **clear definition** plus the appropriate **method of calculation** is necessary, plus possibly an example of a product with elastic demand and one with inelastic demand. The key reason why governments and businesses are interested in knowledge of price elasticity relates to **tax revenue and sales revenue** respectively. Drawing appropriate diagrams is very important to illustrate this. Try not to repeat in part (b) points that you have made in (a) about price elasticity.

Answer

Guidance notes

(a) **Price elasticity of demand** is the ratio of proportionate changes in quantity demanded of the product to proportionate changes in its own price. Mathematically, it is expressed as $\Delta Q/Q : \Delta P/P$ where Δ (Greek capital delta) is the conventional symbol for 'a change in'. This is frequently changed to the more workable $P/Q : \Delta Q/\Delta P$, where Q denotes quantity and P price. Where the result of this calculation is more than 1 (unity), it is said that demand is price elastic; where it is less than 1, that demand is price inelastic. If the ratios are the same, it is said that price elasticity of demand is unity. Where demand is price elastic, an increase in price will lead to a more than proportional fall in quantity demanded, so that total revenue will fall. Where demand is price inelastic, an increase in price will lead to a less than proportional fall in quantity demanded, so that total revenue will rise. Maximum revenue is achieved when elasticity is unity.

$$\text{Price elasticity of demand} = \frac{\% \text{ Change in quantity demanded}}{\% \text{ Change in price}}$$

Clear definitions of elasticity are needed. With the exception of goods with a perverse demand curve (such as Giffen goods) price elasticity of demand is always negative. This is because a change in price causes demand to change in the opposite direction.

Income elasticity of demand is the ratio of proportional change in quantity demanded of a product to a proportional change in the disposable income of the community in which it is marketed. Changes can be in either direction.

Usually a rise in income would be expected to produce an increase in quantity demanded, but some products are regarded as inferior and an income rise enables people to buy preferred but dearer goods, e.g. black and white TV demand fell in the 1970s as people demanded colour TVs.

$$\text{Income elasticity of demand} = \frac{\% \text{ Change in quantity demanded}}{\% \text{ Change in income}}$$

Cross elasticity of demand is the ratio of a proportional change in the quantity demanded of a product to a proportional change in the price of another product. If a rise in the price of A produces a fall in demand for B, it is said that A and B are associated products, e.g. motor car tyres and petrol. If a rise in the price of C produces an increase in the demand for D, it is said that C and D are substitutes (one is preferred to the other if their relative prices change), e.g. lamb and beef. If price and demand change in opposite directions, the negative sign is used as for normal price elasticity. For substitutes where both change in the same direction, the positive sign is used.

Don't forget the methods of calculation! These explanations are much more comprehensive if the text is supplemented by the methods of calculation.

$$\begin{array}{l} \text{Cross elasticity of demand} \\ \text{of Good X with respect} \\ \text{to Good Y} \end{array} = \frac{\% \text{ Change in quantity of X}}{\% \text{ Change in price of Y}}$$

(b) Governments are interested in elasticities because they need to know the effect of changes in income tax, which change disposable income, of indirect taxes, which change relative prices, and of cheaper or dearer imports, and the likely consequences of changes in the national income. Governments also need to know about changes in demand for labour, which depend on changes in product demand. Any attempt at economic planning must use the concept of demand elasticity related to all the influences that figure in the planning process.

Business managers need to know demand elasticities for their own and competitors' products because demand forecasting is essential to plan future production, especially in increasingly capital intensive industries. The gap between taking production decisions and actually achieving the planned production may be several years and the whole operation must be carefully costed. Costs cannot be calculated per unit without making an estimate of expected future demand. Estimates must take into account expected changes in taxes, income levels and other influences, so the effect of these must be known with some degree of certainty.

Elasticity is central to any attempt to calculate the effect of changes in demand conditions and accurate calculation is becoming increasingly important to both government and business.

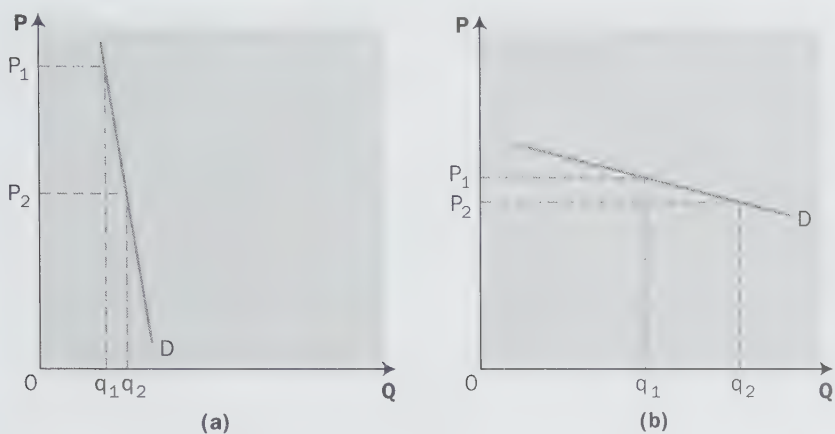


Figure 1

As the two diagrams in Figure 1 show, the concept of price elasticity of demand has a major bearing on the tax levels on products and price setting by businesses. Goods with an inelastic demand tend to have the highest burden of sales taxes such as VAT and Excise tax. The heavy level of tax tends to have small effects on output and employment in the industries affected, with the burden falling mainly on the consumer. In Figure 2 the shaded area represents the tax revenue collected from the consumer with little effect on demand. Governments can predict their tax revenue more accurately on goods with an inelastic demand. Thus it is addictive products such as tobacco and necessities such as petrol that face a heavy tax burden. Businesses will tend to be quite prepared to raise the price of goods with inelastic demand because this will raise their revenue. Often by building up brand loyalty through advertising and special promotions businesses can make their products more inelastic in demand, which

Elasticity of demand normally varies along the length of the demand curve. These are elastic and inelastic sections of demand curves.

Businesses would prefer demand for their products to be price inelastic. It gives them the freedom to raise price which will then raise sales revenue.

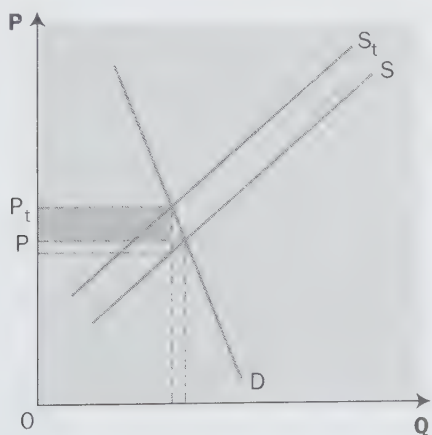


Figure 2

These diagrams must work for you! A rise in indirect taxes such as VAT shifts the supply curve to the left because it serves to increase the suppliers' costs, who then pass on some of those costs to consumers.

is of course in their interest. Figure 1(a) shows that demand falls less than proportionately when there is a rise in the price of a product with inelastic demand. On the other hand, if a product has an elastic demand, businesses producing it may cut the price to raise revenue because demand will rise more than proportionately (see Figure 2(b)).

General comments

Questions on elasticity are common partly because it is easy to apply the concept to real world examples. Questions may be asked on the uses of income and cross elasticity of demand to businesses. Questions on supply elasticity are possible too – not just its determinants but also its importance to business. If a business knows the elasticities of its products, then pricing and product development are much more likely to be successful.

Related question

- (a) Distinguish between 'elastic' supply and 'inelastic' supply. (8)
- (b) What factors determine the price elasticity of supply of a product? (10)
- (c) Why may a business find it useful to know the price elasticity of supply of its product? (7)

- (a) What is meant by 'internal economies of scale'? (12)
- (b) In view of these economies of scale, how do you account for the continued existence of small firms? (13)

Tackling the question

This is quite a traditional economics essay and should pose few problems to a candidate who knows the subject well. The question looks at all the advantages of a firm being big and then it asks you to examine why small firms can be so successful. While part (a) is a straightforward run through your notes, part (b) makes you think a little more. It is worthwhile thinking carefully how many reasons you can come up with and then writing them down in rough before starting. With so many marks available in part (b) you will need four or five plausible reasons. It is important to remember that part (a) asks about **internal** economies of scale and, while you could briefly mention **external** economies, they are not really relevant.

Answer

Guidance notes

(a) When firms increase their scale of production, it is common to find that there is a more than proportionate increase in output. Under such circumstances, the firm is said to be experiencing economies of scale. The implication for the firm is that there will be a reduction in the average costs of production. Economies of scale can be **external** (arising from the growth of the industry) or **internal** (arising from the growth of the firm), and are a result of the increased scale of production.

Internal economies of scale can be classified as follows:

Technical economies: As firms grow larger, there is greater scope for the specialisation of labour. The division of labour can be carried further, with workers being employed on more specialised tasks and thereby increasing their productivity. In addition, as the division of labour is carried further, i.e. jobs are broken down into simple tasks,

It is important to remember that internal and external **diseconomies** of scale also exist. External economies and diseconomies are not always well known by students.

This form of presentation can make it easier for an examiner, but don't make a habit of listing because it can look like notes rather than an essay.

it becomes easier to introduce more specialised equipment. As output increases, therefore, it is unlikely that labour costs per unit will increase proportionately. The principle of 'multiples' is a further technical economy which larger firms can take advantage of. As machines tend to have different operating speeds, small firms with only a few machines find it difficult to obtain a balanced team of machines (which would ensure that each machine was being fully utilised). Large firms, however, have more machines and find it easier, therefore, to organise them in such a way that they are all fully utilised.

Indivisibility: Small firms are unable to take advantage of large-scale manufacturing techniques as many of these processes cannot be broken down for small-scale production. Many chemicals can be produced efficiently only on a large scale. This is also the case with blast furnaces and car production. As the firm grows, it is able to take advantage of these more efficient, larger-scale forms of production.

Financial economies: Larger firms are generally able to raise capital on more advantageous terms than small firms. This is because large firms are able to offer greater security and because their sound record makes it easier for lenders to assess the degree of risk.

Marketing economies: Large firms are able to use their sales forces more intensively: for example, a salesperson can negotiate a contract for 50 units in little more time than 10 units; in addition, the administrative costs do not increase proportionately with the increased size of order. Advertising is also more cost effective, with the ability to utilise mass media advertising (such as TV). Furthermore, where there is a wider product range, advertising one product helps to sell others.

Buying economies: Large firms are able to purchase raw materials and other requirements in larger quantities and, in return, receive bulk-buying discounts which help to reduce their costs. These discounts are not available to smaller firms, which, therefore, face higher costs for material inputs.

Management economies: In small companies, the managers tend to be generalists managing all aspects of the business; large firms, however, can employ specialist managers, such as accountants, production engineers, buyers and legal experts. This introduces a greater degree of specialisation into management and is, therefore, more efficient.

(b) Despite the economies of scale which tend to favour large firms, many small firms still exist. In order to explain their survival, it is necessary to consider why some industries tend to be dominated by small firms and why, in industries dominated by large firms, small firms can be found existing alongside them. Industries which offer personal services tend to be characterised by small firms; as large-

scale operations are difficult to achieve, the growth of the firm may involve loss of personal attention. Examples are hairdressing, high-quality tailoring, restaurants and jewellers.

Where the total market is small, it will not be possible to sustain large-scale firms, as output will be insufficient to exploit the principles of specialisation and division of labour. This is true of retailing in isolated communities, where general shops tend to sell all the communities' requirements, as demand is too small to sustain specialist retailers. Garages tend to be small scale (as it is difficult to achieve economies in car repair work) and there is a limit to how far customers are willing to travel to have cars serviced and maintained; demand tends to be limited, although there is also an element of personal service.

Government fiscal and industrial policy has also influenced the economic environment in which small enterprises can flourish. The rate of Corporation Tax has been lowered on small business profits. An extensive range of enterprise allowances, counselling and advice is available to individuals and existing small enterprises through Regional Development Offices and the Department of Trade and Industry, with the emphasis on developing an 'enterprise culture' and promoting small independent business organisations. The Loan Guarantee Scheme helps small businesses to borrow, providing a guarantee of 85% for loans up to a maximum of £250,000.

In industries producing highly individualistic items or 'exclusive' products, which are the creations of talented individuals, the typical firm will be small; any attempt at mass production destroys the uniqueness of the products. Examples here are high fashion or designing. Small firms may survive in an industry by identifying a small, specialised segment of the market which does not interest the larger producers. For example, detergent manufacture in the UK is dominated by Procter & Gamble and Unilever, but a number of small firms survive by producing specialised products, such as industrial cleansers and medicated soaps.

Although the engineering industry is dominated by the large firms, there are still a large number of smaller firms. These firms survive by taking the kind of 'one-off' jobs that do not interest the larger firms because they cannot achieve economies of scale in production. Larger firms may also frequently sub-contract a part of a process to a smaller firm specialising in that particular process. There may also be sub-contracting of work when the larger firms take on too much business but do not have the capacity to deal with it; some of the orders are then sub-contracted to smaller firms. Sub-contracting to

One of the classic ways of distinguishing scale of production can be shown by a phrase such as 'car production is usually carried out by large firms but car repair is usually done by small firms'. Why is this so?

These are often called the economies of disintegration and are likely to be seen in the car industry.

Franchising is particularly common with filling stations and fast-food outlets. The Body Shop in the UK has been developed partly by franchising.

smaller firms is particularly widespread in the construction industry. The growth of franchising has also influenced the growth of small enterprises, operating as independent units within a national organisation.

In a highly concentrated industry, it is possible that the dominant firms allow a number of small firms to survive in order to avoid the attention of the Monopolies and Mergers Commission. Therefore, whilst internal economies of scale appear to favour the larger firms, it is by no means impossible for small firms to survive alongside them, and many of those small firms may well be the large firms of tomorrow.

General comments

Economies of scale and diseconomies of scale are long-run concepts in economics when all factors of production are variable. It is important not to confuse these concepts with increasing and diminishing returns to a factor. The latter is a short-run concept when only one factor of production (usually labour) is variable and all the other factors are fixed. The short-run and long-run average cost curves are related to these concepts too.

Related question

- (a) Briefly distinguish between internal economies of scale from external economies of scale. (8)
- (b) How do internal and external diseconomies of scale arise? (17)

Explain the different types of economy of scale which are more likely to occur as a result of:

(a) horizontal integration; and (12)

(b) vertical integration. (13)

Tackling the question

This question asks you to show how economies of scale and the motives for mergers are connected. A good answer will be able to relate these two areas of the syllabus. An important skill at A-level is to be able to pull knowledge out of different syllabus compartments and apply it to a particular question. Clearly economies of scale bring cost advantages to firms and mergers will be popular in industries where significant scale economies can be achieved. The use of examples from the business world will help with this answer.

Answer

Guidance notes

There are three main reasons why firms may wish to grow: firstly, to achieve a greater market share; secondly, to achieve greater security by product diversification; and thirdly, to achieve economies of scale. There may be other motives but these three categories are the most important.

Firms may grow by means of internal expansion, but frequently more rapid growth will be achieved by either the acquisition of, or merger with, an existing organisation. **Horizontal integration** occurs when firms engaged in a similar stage in the production process – primary, secondary or tertiary – merge under single control. For example, the merger of Rowntree and Nestlé represented a manufacturing horizontal merger. Some of the largest UK companies have been created as the result of horizontal mergers – British Airways, Associated Biscuits, Storehouse and GEC being a few examples.

Vertical integration occurs when a merger takes place between firms which are engaged in different stages of a production process. Vertical integrations can themselves be of two types. **Backward**

Despite the (a) and (b) split, a general introduction is a good idea here. This gives an opportunity for you to define the two types of integration and give examples of each. Recently firms have merged **parts** of their operations, such as BP and Mobil in Europe and the proposed P&O/Stenna Sealink merger in the cross-channel market.

vertical integration involves the merger of a firm with another firm at an earlier stage in the production process: for example, a clothing manufacturer taking over a textile firm. Such mergers may be defensive, in order to ensure supplies of raw material or components, but can be part of an aggressive policy if supplies are then denied to competitors. Such mergers were, at one time, common in the motor car industry: for example, the British Motor Corporation's take-over of the Pressed Steel-Fisher body plant. **Forward** vertical integration is where a manufacturer takes over a retail outlet for its products: for example, the breweries taking over public houses, or a motor car manufacturer taking over a distribution network for cars.

In the early 1990s, the majority of mergers (over 60%) were of the horizontal type, and mainly for defensive reasons in the face of world recession. However, economies of scale also provide one of the major motivations for mergers of both the horizontal and vertical variety. Mergers which may damage the public interest can be referred to the Monopolies and Mergers Commission for scrutiny, such as the Bass takeover of Carlsberg-Tetley.

(a) Horizontal: A major source of economies resulting from horizontal mergers relates to the buying function. The centralisation of the purchasing function for a number of companies facilitates the establishment of better buying systems and the use of specialist buyers. In addition, major economies can be achieved from the purchasing of larger quantities of raw materials and components in the form of more advantageous bulk discounts. Major buyers pay considerably less per unit for their supplies than do smaller buyers. These discounts are very important at the retail level, where they give a significant advantage to the large multiples over the small retailer.

As firms become larger, they tend to represent a more secure risk to financial institutions and, therefore, find it easier and cheaper to raise finance. The cheaper finance arises from the fact that they do not have to offer a high rate of return, as small firms do, in order to attract investors.

Significant marketing economies may also result from horizontal mergers. Primarily, the horizontal merger allows for the more efficient use of the sales force: for example, it may take a salesperson little extra time to take an order for 100 units rather than 10. With the same administrative costs spread over a larger number of units, there are also administrative marketing economies and economies in distribution, warehousing and vehicles. A large group with a diversified product range may also gain advertising economies in that, when one product is advertised, there is a beneficial 'spin-off' for the whole product range, sometimes referred to as 'piggy-back' advertising. For example, Wall's ice cream advertisements help to sell its sausages. Petroleum corporations like BP, Shell and Esso concentrate on

brand/logo advertising rather than specific product promotion – ‘You can be sure of Shell’.

Horizontal integration may also provide technical economies. In particular, the pooling of research and development effort can bring about considerable savings. The use of larger machines can also increase efficiency and reduce average costs: for example, whereas the output of a single firm could not fully utilise larger, more efficient machines, when two firms are combined their joint production may well justify a larger plant. The same argument applies to the need to justify new technology: for example, computerised control systems and production methods. Increasing the size of the firm also provides further scope for division of labour, due mainly to the introduction of larger, more specialised equipment.

An increase in the scale of the organisation due to horizontal growth may also result in managerial economies. Larger organisations can apply specialisation to managerial functions more effectively than small organisations and, in particular, may be able to offer the higher rewards necessary to attract the most talented managers. Large firms are, therefore, able to apply specialised management in the fields of accountancy, marketing, purchasing and production, with the subsequent benefits arising from specialisation.

There are many examples of horizontal integration in manufacturing – a few of the most significant have been GEC and English Electric, Rover Group and BMW, Allied Breweries and Showerings. In the airline industry there has been British Airways and British Caledonian and in retailing Curry’s and Dixons. In recent years ‘demerging’ has become popular, involving companies splitting up, e.g. Courtaulds and ICI.

(b) Vertical: Economies of scale are generally less prevalent in vertical than in horizontal integration. However, since the organisation will increase in size, finance may be cheaper and easier to raise and there may be some advantages from greater specialisation of management functions.

One of the major advantages of backward vertical integration is closer control over the supply of raw materials and components. This reduces risk by allowing direct control over quality and delivery. Guaranteed quality reduces inspection costs and reject rates during processing, and improved delivery performance makes it possible to reduce the stock levels of raw materials and components, considerably reducing inventory carrying costs. Such integration with suppliers of components is one of the reasons why the Japanese have been able to reduce motor vehicle production costs, by integrating the supply of production components with the manufacturing requirements of the car plant – a technique referred to as **Material Resource Planning**.

Use examples! Horizontal mergers within the European defence industry may become inevitable in the future, so that European firms can compete with US firms. This will result in **research economies of scale**.

This part is harder! Vertical integration is not as likely to produce as many economies of scale but it can confer many advantages and significant market power on the firm.

Vertical integration also facilitates the 'end-on' linking of production processes, where considerable technical economies may ensue. Machine times can be set accordingly in order to avoid excess work-in-progress and to prevent machines standing idle whilst they wait for another part in the process to catch up. For example, the more modern steel works combine the production of iron and steel and the rolling of steel into one continuous process.

Vertical forward integration frequently involves gaining control over distribution networks. Besides reducing the cost of distribution and ensuring an outlet for the firm's products, this enables the firm better to match its production levels to market demand, particularly where ownership extends to the retail level, so that market information can be fed back to the plant in order that sales and production forecasts can be adjusted.

Vertical integration also has the effect of widening the range of goods produced by the firm, a process known as product diversification; this reduces the risk of failure by a single product, which could severely damage the firm's survival prospects. This can be considered as a further economy of scale.

Conclusion! The European Union and the **Single Market** have affected the way firms pursue merger policy. **Cross-border mergers** could bring significant **marketing economies of scale**. Such mergers may attract investigation by the European Commission.

Economies of scale probably provide a greater element in the motivation for horizontal integration than they do in vertical integration. But even here they provide only a single element in what is usually a far more complex decision, and in recent years many mergers have been purely defensive and strategic in character, particularly as a result of European harmonisation in 1992. Some mergers have taken place within the European Union to give companies a greater opportunity to exploit the benefits of the Single Market. This was the primary reason for the merger of the Swiss company Nestlé with Rowntree.

General comments

Horizontal and vertical integration are important concepts in the areas of **structure, conduct and performance** in markets. It is important to remember that lateral and conglomerate integration are concepts associated with **diversification** in industry. In recent years the idea of demerging has become very fashionable in some industries as **diseconomies of scale** have become apparent.

Related question

- (a) How far can horizontal and vertical integration affect the market power of a firm? (10)
- (b) What is the current policy of the UK and the European Union towards mergers? (15)

- (a) Distinguish between the short run and the long run. (10)
- (b) What is the likely shape of the long-run average cost curve? (15)

Tackling the question

This question tests your understanding of economic theory. It is important to show how the short run **relates to** the long run, and why long-run average cost curves are not **always** going to rise. Be prepared to explain how firms have dealt with rising average costs through **demerger**: for example, Hanson and British Gas.

Answer

Guidance notes

(a) In the short run, a firm is unable to react to changes in the demand for its product by altering its capacity through an increase in fixed costs. Thus, its plant and its fixed costs remain substantially unchanged. If it tries to expand production, it must add more and more inputs of variable costs. As production expands, the ratio of fixed costs to variable costs falls. Average fixed costs continue to fall, but as the firm continues to add variable factors while keeping its fixed factor constant, diminishing marginal returns will be experienced. As diminishing marginal returns are experienced, marginal costs, which are really only the change in variable costs, will rise. If the firm continues to expand production with the total fixed cost input constant, the marginal cost curve will continue to rise and will meet the falling average total cost curve. At this point, the average total cost curve must begin to rise.

Clearly, once the last additional unit produced costs more than the existing average, the new average at the additional target level must be higher. This produces the typical U-shaped total average cost curve, which is the shape normally expected for the firm operating in the short run. This is illustrated in Figure 1.

The marginal cost curve cuts the average cost curve at its lowest point. It is also worth remembering that the marginal cost curve cuts the average variable cost curve at its lowest point too.

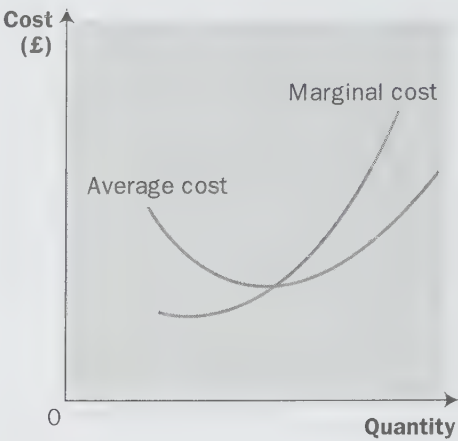


Figure 1

In the long run, however, the firm is able to respond to opportunities to produce more by expanding its productive capacity, i.e. by increasing plant and machinery, expanding factory space, etc. This means that it is able to increase its input of fixed costs. By doing this it is able to avoid the onset of diminishing marginal returns and obtain continuing economies of large-scale production. The result depends on the success of the firm in continuing this process by adding more and more inputs of fixed costs, i.e. achieving more productive capacity by increasing capital, land and technical skill.

(b) There are three long-run possibilities for the shape of the long-run average cost curve. There may come a time when the firm is no longer able to increase one factor – perhaps managerial skill – and then diminishing marginal returns are experienced once again. The long-run marginal cost curve moves up and produces the familiar U-shaped average total cost curve for both the long and short run. This is illustrated in Figure 2, which shows both short and long run average cost curves. The succession of short-run curves (SAC) illustrates the effect of successive inputs of additional fixed costs.

The formation of the long-run average cost curve from a number of short-run cost curves is often called the 'envelope diagram'. All points below the long-run average cost curve are unobtainable with existing technology.

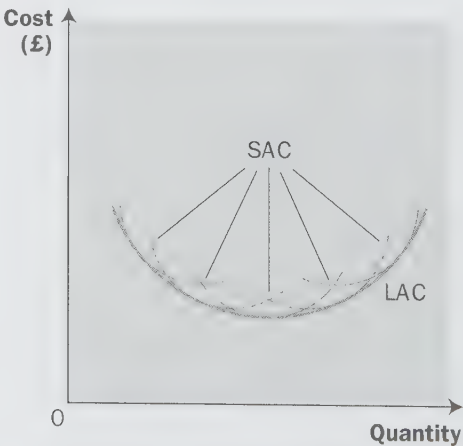


Figure 2

The firm may fail to gain additional economies of scale after a time, but manage to avoid diseconomies by the process outlined in (a) above. Professor Marris – a keen observer of business organisation – has observed that it is the function of the business manager to solve the problems of diminishing returns and ‘flatten the U-shaped average cost curve’. This is shown in Figure 3.

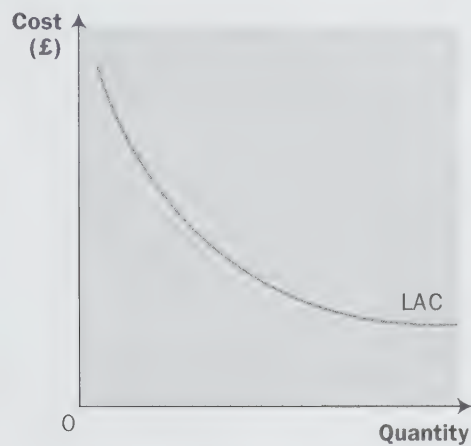


Figure 3

If the ratio of fixed to variable costs remains high in spite of continued increases in production, the firm may go further than simply flattening the curve. It may continue to keep it downward sloping. This is illustrated in Figure 4.

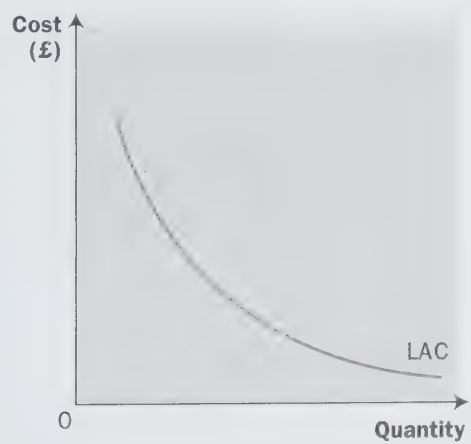


Figure 4

However, diseconomies of scale eventually emerge for managerial and organisational reasons, and these force up the long-run average cost curve. Very large companies which are highly diversified often find that there is no synergy between their constituent parts and that they would be more efficient and profitable if the whole operation were demerged. This has happened in the UK in recent years with Hanson and Thorn-EMI. It should perhaps be stated that for technological reasons the shape of the long-run average cost curve in an industry can change over time. The **minimum efficient scale**

The shape of the long-run average cost curve is not always U-shaped. A good answer to this question will involve discussion of the alternatives. Are diseconomies of scale inevitable?

The key to good answers is the application of micro-economic theory to the real world. There are plenty of examples of how businesses have reacted to cost

increases by reorganisation, merger and most recently demerger. Changes in market conditions and particularly new technology mean that the search for cost minimisation is an on-going process.

(MES), which is the level of output beyond which average costs fall no further, may well increase over time. For example, it can be argued that successful mass production car businesses have to be much bigger today than, say, 40 years ago. The costs of research and development and setting up high technology production lines meant that, prior to its takeover by BMW, the Rover Group was too small to compete with Ford or Fiat. The long-run average cost curve is thus likely to vary in shape over time and between industries. For example, the MES in oil refining will be different to that in car repair.

General comments

The application of the theory of costs is very important when discussing topics such as market structure. The minimum efficient scale (MES) in an industry has a major bearing on its structure. A very high MES can mean an industry is dominated by one or two large firms or is even a natural monopoly. Is this true with the UK's Post Office or the railway system? A low MES means that an industry can be characterised by a large number of small firms. This may be true of hairdressing, for example.

Related question

- (a) Distinguish the meaning of the terms 'structure', 'conduct' and 'performance' in the context of a market. (10)
- (b) What factors may determine the above terms in a particular market? (15)

- (a) Explain why oligopoly may tend to result in price rigidity. (15)
- (b) What action can be taken by an oligopolist in order to increase his share of the market? (10)

Tackling the question

Questions on market structure are common in A-level papers. In this question, you are expected to outline what oligopoly is and why price stability occurs. Thus the issue of **interdependence** is very important. An accurate drawing of the kinked demand curve will have to appear somewhere because it helps to explain why price stability occurs. In part (b) great emphasis needs to be put on **non-price competition** as an alternative to price competition. Note that higher marks are obtained when real world examples are used to illustrate points.

Answer

Guidance notes

(a) **Oligopoly** is said to exist when there is more than one seller in the market, but the number of sellers is not so large as to make the contribution of each negligible. If the market consists of only two sellers, the special case of **duopoly** exists. Oligopoly is characteristic of a high proportion of manufacturing industries in Western countries and, in the UK, is evident in the car industry, soap and detergents, banking, chemicals, brewing and the marketing of commodities such as bananas, coffee and tea.

The difference between oligopoly and other market forms rests on more than just the number of firms in the market; there is also a qualitative difference. This qualitative difference is the fact that, when numbers in a market are few, each seller becomes acutely conscious of the **actions** of its rivals and of **their reactions** to changes in its policies. Price and output decisions are, therefore, influenced not only by the firm's reactions to changes in costs, demand and tastes, but also by how the firm perceives the reactions of other firms to these changes. In industries characterised by a small group of producers, therefore, competitors' reactions to the behaviour of each other can be a major factor in decisions regarding price and output. This can be best illustrated by referring to the extreme case of duopoly. Since

Make sure you know what oligopoly is! In the UK the confectionery industry is a good example of an oligopoly, with a large proportion of the market in the hands of three firms – Cadbury, Mars and Nestlé-Rowntree.

the market is divided between only two firms, any form of action which benefits one firm will be harmful to the other and any such action by one firm will, therefore, be met by at least an equal response from the other. Both firms are, to a certain extent, interdependent and the policies of one must influence the other. This is referred to as 'mutual dependence recognised'. Game theory is concerned with the study of optimal strategies to maximise pay-offs, given the risks involved in judging the responses of rival firms.

Clearly a situation exists where firms may wish to avoid taking any action which will result in an equal or greater response by competitors. This provides some basis for understanding the price rigidity that is frequently observed in oligopolistic markets.

A few names can always be dropped! These economists have contributed much to the field of market structure and conduct. At A-level you would not be expected to know this in detail, but even a brief mention can be very impressive!

Various attempts have been made to formalise this analysis, including those of **Cournot** (1838), **Edgeworth** (1925) and **Hotelling** (1929); however, an explanation which is commonly adopted is that of **P. A. Sweezy**, the so-called 'kinked demand curve'. This theory attempts to explain the observed price rigidity by analysing the demand curves faced by an oligopolist, particularly in situations where that firm is not the price leader.

In many oligopolistic markets, one firm may become recognised as the established price leader, with other firms tending to price at or near the price leader. Figure 1 represents this situation. The firm which is not the price leader faces two demand curves, one the elastic curve (aa) and the other inelastic (bb). If the firm raises its price, its competitors will not follow suit and there will be a loss of revenue; the firm is, therefore, on the elastic portion of the curve aE for price increases. If the firm reduces its price, then its competitors have no alternative but to match the price cut or make even greater price reductions – again a situation which will result in a loss of revenue; therefore, the inelastic portion of the curve (Eb) applies to price reductions. Price reductions may also result in a price war, which

An important diagram. The kinked demand curve is the basis of the idea that oligopolies are characterised by non-price competition because price competition is too risky.

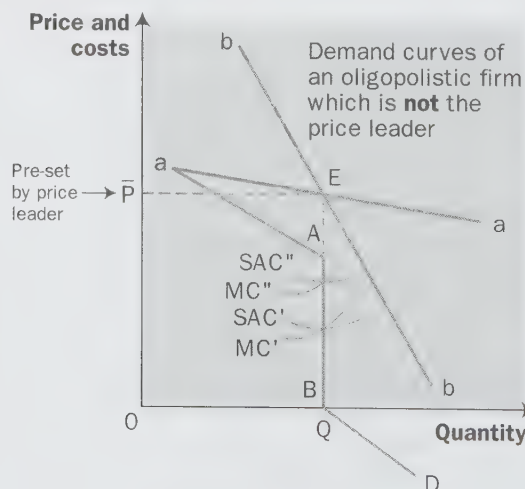


Figure 1

could be disastrous for all firms in the long run and hence a situation they would all prefer to avoid. Fear of such a price war may in fact result in price stability.

The firm's actual demand curve is, therefore, aEb , with prices tending to be rigid at the level established by the price leader. The actual demand curve thus has a 'kink', illustrated as point E. The marginal revenue curve $aABD$ consists of section aA (corresponding to demand curve aE) and section BD (corresponding to demand curve Eb), with a vertical section (AB) coinciding with the kink in the demand curve. It should be noted that marginal cost can intersect marginal revenue at any point on AB and result in the same price and output combination. In the diagram, two firms are illustrated, both with different cost structures but both with the same price and output combinations. This analysis explains **how** the kink occurs, but its weakness is that it cannot explain **where** it will occur and may be regarded more as an analysis of what has happened in such a market, than as a prediction of market equilibrium.

(b) Although oligopolistic markets may be characterised by price rigidity where firms do not compete on price, the individual firm will still desire to increase its market share. Firms will attempt to attract customers to themselves by means **other** than a price differential; such methods are, therefore, referred to as **non-price competition**, which may take a variety of forms. Advertising is probably the most widespread form of non-price competition. Advertising is used to attract custom, to create brand loyalty and to establish real or spurious differences between the firm's products and those of its competitors. Advertising also gives the impression that a market is highly competitive, which it may be, but in everything other than price.

Another method of increasing market share by non-price competition is the creation of real, or artificial, quality differences between products. Product differentiation of this type divides the market into a group of sub-markets, which facilitates the use of price differentials. The car industry is a good example of this. There are definite quality differences between various car models – for example, a Ford Fiesta has definite and specifiable differences compared with a Ford Mondeo – but there is also a considerable difference in price as no one buyer is likely to be a potential customer in both markets. All the car manufacturers, however, engage in non-price competition within each sub-market. There is, therefore, within the broader market, not only competition to create new quality classes and gain an advantage over competitors, but also competition within the sub-classes of varying quality.

A third technique adopted is that of design differences, with annual model changes, which may be no more than cosmetic. The

Use examples! Products can have their names changed to attract new customers. This happened with the chocolate bar 'Marathon' being changed to 'Snickers'.

motor car industry is again a good example. Careful marketing can promote the psychological belief amongst consumers that what they have already is obsolete.

In cases where the market is in decline or the country is in recession it is possible that oligopolists will resort to a price war to retain their market power.

Non-price competition can also include a wide variety of promotional activities allied to advertising campaigns. These include free offers, coupons (which can be collected to obtain free gifts), warranties and after-sales service, competitions and, in recent years, sponsorship of sporting activities. Oligopolistic markets may, therefore, give the appearance of being highly competitive, but in reality, the most important element in true competition may be lacking – that of price.

General comments

Mere knowledge of the theory of market structures is not enough for high marks in this part of the syllabus. Most questions will ask you to apply knowledge. Even perfect competition can be tested by asking you to assess its relevance to the real world. Monopoly is a common feature of modern economies – are they always going to work against the consumers' interests? How do entry and exit barriers affect the behaviour of firms in the economy? Do oligopolistic and monopolistic markets work against the public interest? The Monopolies and Mergers Commission is asked to make decisions in the public interest, but what is the public interest?

Related question

- (a) What are the necessary conditions for the formation of a successful cartel among producers? (10)
- (b) Why do cartels usually act against the interests of consumers? Can they ever be of benefit to consumers? (15)

- (a) Explain why road congestion is an example of market failure. (10)
- (b) Using economic analysis, show how road tolls can provide a solution to the problem of road congestion. (15)

Tackling the question

Questions on **market failure** are increasingly common at A-level partly because of increased environmental awareness in society. Also it has become quite easy to apply economic concepts to this issue. This latter point is quite important when preparing to answer this question, because the use of economic theory is a critical element of the answer. It is quite possible for many intelligent people to answer questions of this kind in a way which seems fairly plausible, but which does not involve the use of economic theory. In this question the use of concepts such as social benefit, welfare loss and marginal cost is very important. Part (a) is fairly unproblematic, but part (b) requires good understanding of how road pricing can solve the problem of excess demand. There is a danger of giving a superficial answer if appropriate theory is not used as a framework.

Answer

(a) Road congestion is an example of excess demand and is 'solved' by queuing in traffic jams. When one sees excess demand in a market it is an indication of the price being too low, a point which will be returned to later. Congestion arises because when making a journey by car, the motorist only considers the **marginal private cost** (MPC), which is mainly petrol. He or she will consider variable costs such as petrol because the fixed costs such as road tax, insurance and depreciation are not related to mileage.

Petrol costs are directly attributable to the motorist, as is his or her time for the journey. However, the full costs of the journey are not only these private costs but also the costs that the motorist imposes on society. These include pollution, noise and time lost by others

Guidance notes

Good use of theory is essential in this kind of essay. Much modern micro-economic theory is tested in examinations by applying it to real world problems. The skill in examinations is to apply it correctly.

It can be a good idea to end part (a) with a neat lead into part (b). The style of the essay is all important and it must flow even when there are separate parts. This gives the impression of greater understanding to the reader.

Living standards rose considerably in the 1960s and with the extension of credit, car ownership was within reach of most income groups. For many families car and house ownership were key priorities and a sign of rising affluence.

This introduction prepares for the main part of the answer!

Don't forget you can use abbreviations in essays as long as the term is written out fully once at the beginning.

due to congestion. When added to the private costs, these external costs are called the **marginal social costs** (MSC). The difference between the MPC and the MSC of a journey is the external cost imposed by the motorist on society. The existence of externalities in any market is evidence of market failure. **Market failure** will be removed when the level of consumption or production occurs at the point where marginal social cost = marginal social benefit. Plainly this does not happen when road congestion occurs because of the inconvenience to all road users. To correct the market failure of road congestion a policy to lower demand is needed, which means raising the price of car travel. This can be done by tolling.

(b) Road congestion is not a new problem. During the 1960s the extensive building of motorways was designed to increase the supply of road space to meet the rising demand from soaring car ownership. The freedom given by owning a car made cars a very income elastic product.

At first the solution to excess demand on the roads in the form of congestion was to build more of them. During the 1960s and 1970s the UK's motorway system was enlarged considerably and it was hoped that by raising supply the ever increasing demand would be satisfied. However, building more roads was only a temporary solution because it merely encouraged more people to drive their cars more often and further. Motorways made it possible to travel further to work and go for days out. It was a case of supply creating its own demand. By the 1990s building more roads was no longer considered the solution to congestion. Public finances could no longer afford big road building schemes and environmentalists were mounting effective protest campaigns. The idea that expansion of the road network was going to be limited in the coming years became unofficial government policy.

Road tolls have now become the obvious way of reducing demand in the face of fixed supply. Figure 1 represents the demand for travel along a particular stretch of motorway. Up to the position F_1 the flow of traffic results in no road congestion, thus there is no divergence between MPC and MSC. The private cost to the motorist is C_1 .

As the flow of traffic increases above F_1 congestion is apparent and there is a divergence between MPC and MSC. If demand for travel on a particular route is downward sloping, this measures the **marginal private benefit** (MPB) to the motorist. The flow of traffic will be determined by the intersection of the demand curve and the MPC curve at F_3 . At flow F_3 the external cost not taken into account by the motorist produces a welfare loss shown by the shaded area.

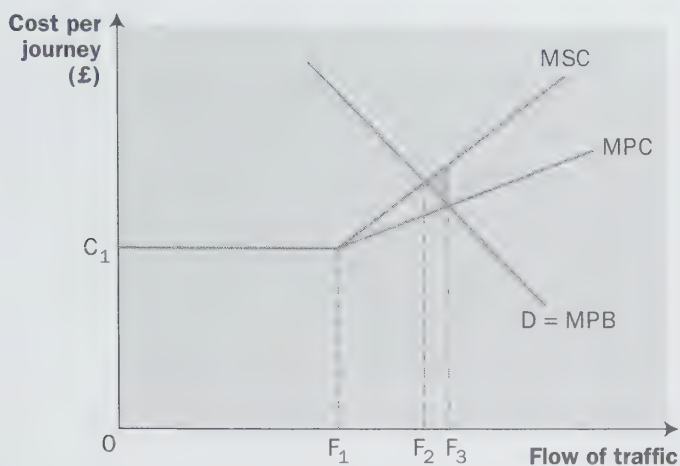


Figure 1

This means that resources are not being allocated efficiently and that motorists are making more journeys than they would if they were aware of the full social costs.

If a toll (T) were imposed on motorists to add to their private costs, then this additional charge would rectify the allocative inefficiency because the marginal benefit to the motorist (the demand curve) would be equal to the MSC of making the journey (see Figure 2). The toll is the vertical distance between the MPC and T and is equal to the cost of the congestion imposed by the motorist on others. The flow of traffic would now fall to F_2 . However, although congestion has been reduced, it has not been eliminated. An effective tolling system may have to vary at different times of the day. In the early hours of the morning the toll could be very low, whereas in the early evening it could be very high. A system of tolling which uses a form of peak and off-peak charging should be possible when suitable electronic devices are fitted in cars in the coming years. This price discrimination will reduce congestion at peak times and spread demand to off-peak times.

It's good to bring in a relevant concept like price discrimination at the end – even though it's not central to the essay.

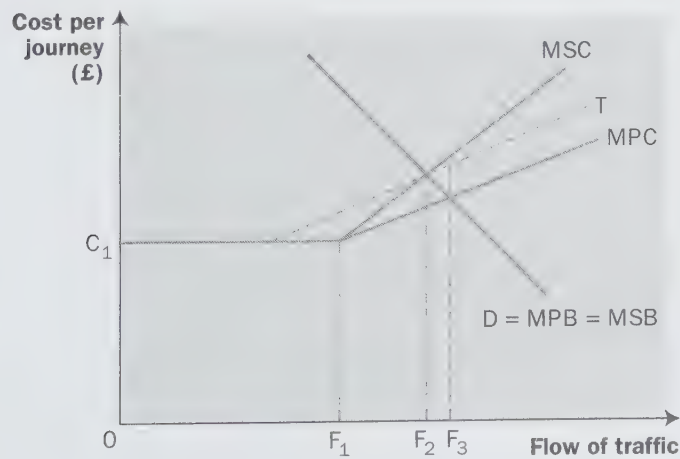


Figure 2

General comments

In a market economy consumers are assumed to maximise their utility and producers to maximise their profits. Decisions made by consumers and producers are likely to be made on the basis of private costs and benefits. Unless the full social costs and benefits of production and consumption are taken into account, so that $MSC = MSB$, a misallocation of resources will result. This is market failure. How should society try to correct market failure – by persuasion or regulation?

Related question

- (a) Distinguish private costs from external costs. (8)
- (b) Explain how a system of pollution permits can be used to reduce emissions from coal-fired power stations. (17)

- (a) With the use of diagrams, show the effects of externalities on allocative efficiency. (15)
- (b) How may the externality problem in the case of lead pollution from motor vehicles be reduced? (10)

Tackling the question

This question is testing economic theory in part (a) and then moves on to a real world problem in part (b). You need to define **externalities** carefully at the beginning, then use diagrams to show how externalities can cause the level of output to deviate from the allocatively efficient level. Negative externalities cause overproduction and positive externalities underproduction. Taxes and subsidies can be applied to correct market failure, although this is not required in the answer to part (a). In part (b) some general knowledge of the road pollution problem has to be allied to economic theory. In this part the use of **taxes and subsidies** can be brought into the answer.

Answer

Guidance notes

(a) An **externality** is a cost or benefit external to an exchange: that is, a cost or benefit to parties other than the immediate buyer and seller in a transaction. For instance, an oil refinery may set up in a town and pay for all the inputs required – land, labour, capital and entrepreneurship. The costs of these inputs are then reflected in the price charged for the activity. However, assuming that there is no government legislation against pollution, the refinery will discharge pollutants into the atmosphere. This represents an additional cost which is not directly paid for by the refinery and may take the form of increased respiratory illnesses for people in the town.

The spillover effect, which in this case is a negative externality, is shown in Figure 1, assuming a perfectly competitive industry. The demand curve represents **private marginal benefits** (PMB) obtained from consuming an extra unit of the product, whereas the supply curve shows the **private marginal cost** (PMC) of producing it. Initially, if we assume no externalities, allocative efficiency is

Define negative externalities! These are also known as external costs. When external costs arise, market failure occurs because goods are either overproduced or overconsumed.

Show the welfare loss of externalities in your diagram! It is very easy to draw this shaded area in the wrong place. Figures 1 and 2 show the welfare loss from both types of externality.

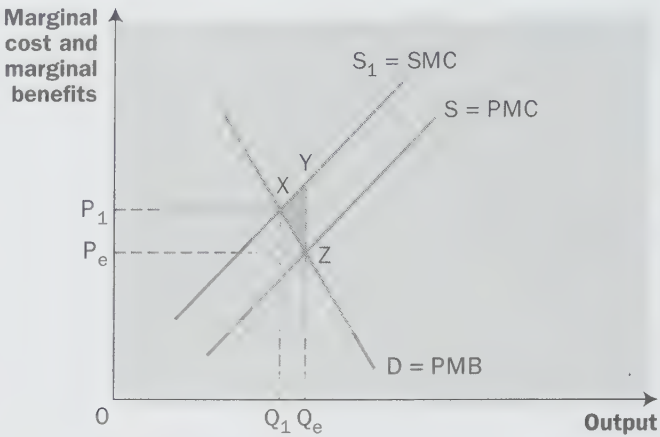


Figure 1 The effect of an external cost on allocative efficiency for an industry.

achieved when the private cost of the last unit of the good produced is equal to the private benefit obtained from its consumption: that is, $PMC = PMB$. The equilibrium price and output are OP_e and OQ_e respectively.

However, with the inclusion of external costs (which are added to PMC to give social marginal costs, i.e. SMC), allocative inefficiency will occur at output OQ_e . This is because SMC is greater than PMB and there is now an overproduction of $Q_e - Q_1$. The efficiency loss to society is shown by the shaded area XYZ (the difference between the cost to society of producing $Q_e - Q_1$ and the value placed by society on its consumption – the latter is indicated by the demand curve). If output is reduced to OQ_1 and price raised to OP_1 then allocative efficiency is restored.

Some externalities are beneficial to third parties, an often quoted example being people who are less likely to catch diseases since they have been inoculated. These benefits are called positive externalities and their effects on allocative efficiency are shown in Figure 2.

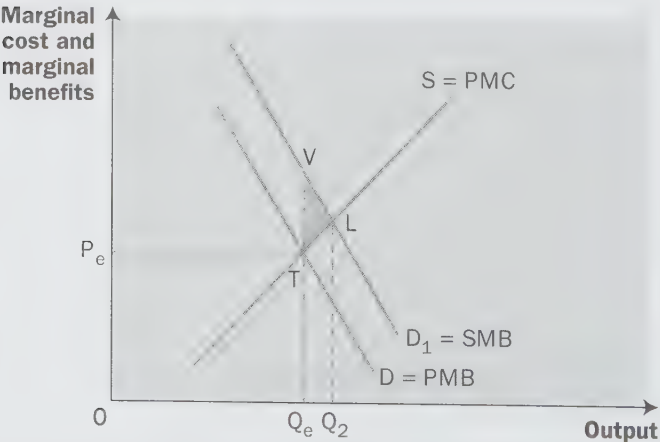


Figure 2 The effect of an external benefit on allocative efficiency for an industry.

Initially output is OQ_e and price OP_e , where PMC equals PMB . The introduction of external benefits (which are added to PMB to give **social marginal benefits** (SMB)) causes allocative inefficiency at output OQ_e . This is because SMB is greater than PMB , leading to an underproduction of $Q_2 - Q_e$ and an efficiency loss to society shown by the shaded area TVL (the net gain if $Q_2 - Q_e$ were to be produced).

In general, allocative efficiency will occur at that output and price where $SMC = SMB$, but the free market equilibrium will be where $PMC = PMB$. Thus, unless externalities are 'internalised' (i.e. private costs are made to reflect external costs) within the market so that firms and consumers take them directly into account, a misallocation of resources will arise.

(b) Lead produced from the burning of petrol is a **negative externality** or external cost because it is not reflected in the price of petrol bought by the motorist. The lead produced by a car exhaust imposes costs on others in society, such as brain damage in some cases.

Lead pollution is only one of the many pollutants that emerge from car exhausts. In recent years there has been significant progress in this area mainly through the tax system that applies to the purchase of petrol. By ensuring the tax on lead-free petrol was lower than the tax on leaded petrol, the government has directed consumer demand towards unleaded petrol simply because it is cheaper. By ensuring that this price differential remains, the government is helping to reduce lead (a negative externality) in the atmosphere.

Over the coming years, governments face increasing pressure to lower direct taxation such as income tax, but also to raise public expenditure on merit goods such as health and education. Thus fining and taxing polluters is a convenient and popular solution in an increasingly environmentally conscious world. As many older cars are not able to take lead-free petrol, the government could subsidise the cost of conversion. The price of catalytic converters could be reduced by the use of a subsidy too. Car manufacturers could be ordered by law to fit catalytic converters to all new cars by a certain date, or at least to produce cars that have an ability to take lead-free petrol. This policy has already been applied in some countries. There is the possibility of putting a ban on the production of leaded petrol, which is a little draconian, or giving heavy subsidies to the production of unleaded petrol. If more people travelled by public transport or cycled or walked then lead pollution would fall. This involves more subsidies to public transport to make it cheaper, the building of cycleways and advertising the health advantages of walking.

Don't forget this question also covers positive externalities! It is very easy to forget this and assume that allocative inefficiency only arises out of negative externalities.

Say why lead is a negative externality. The brain damage caused by lead pollution in congested urban areas has been identified in studies of young children living in big cities.

The mention of an actual policy in your answer is good!

General comments

Market failure remains very popular as a source of examination questions. The road problem has been in the news in recent years for a variety of reasons. It is important to remember that other issues of market failure are important too, such as health and education. How far should private enterprise enter the provision of health, education, roads and even prisons? The heavy demands on public expenditure have made it unlikely that future governments will be able to meet the spending commitments of their predecessors. Lots of new issues are now facing economists in this field.

Related question

- (a) Distinguish between public goods, merit goods and private goods. (10)
- (b) In recent years private finance has been used to help provide public and merit goods. How has this been made possible and what are the benefits and drawbacks of such an idea? (15)

- (a) What is profit? (10)
- (b) What are the functions of profit in a market economy? (15)

Tackling the question

Part (a) of the question seems to be demanding quite a lot for 10 marks. Many students may be put off this question because they might find it hard to write at some length about profit. However, if you think carefully, you should actually know enough about profit to produce an acceptable answer. When questions are divided into two or more parts, it is worth bearing in mind that they should only be tried when you can make a good attempt at every part. Don't let an opportunity to shine in part (a) make you lose sight of the importance of part (b).

Answer

Guidance notes

(a) The most basic definition of profit is that it is a surplus, an excess of return over outlay. Accountants look at profit in a different way from economists. The former see profit as being total revenue minus total costs. However, economists define profit as total revenue minus the opportunity cost of inputs. Economists distinguish **normal profit** from **abnormal or supernormal profit**. Normal profit is the opportunity cost of the entrepreneur, i.e. the minimum amount necessary to attract him or her to an activity or to induce him or her to remain in it. Abnormal profit is any profit over and above normal profit. Essentially normal profit is transfer earnings and abnormal profit is economic rent. While a monopolist can earn abnormal profit in the long run, a firm in perfect competition will only earn it in the short run because a lack of entry barriers will attract the entry of new firms.

Figure 1 shows the abnormal profit made by a firm in an imperfect market. When average revenue is greater than average cost, abnormal profit will be earned. When average revenue equals average cost, only normal profits are earned.

A good diagram can really help in this type of essay. Make it work for you! Remember that the marginal cost curve cuts the average cost curve at its lowest point.

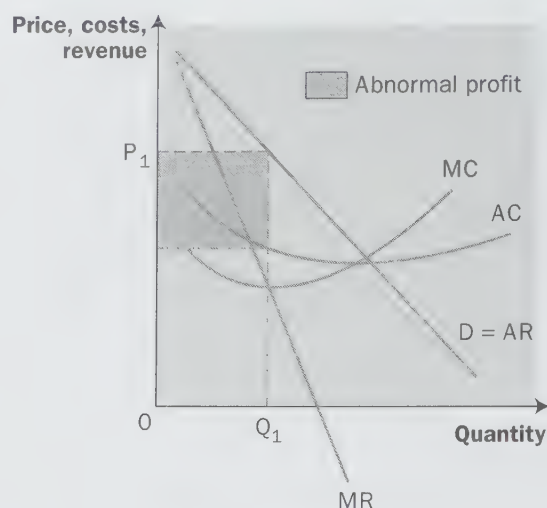


Figure 1

Make a good clear start but avoid repetition – it's very easy to do this. Each point must be clearly distinguished from the others.

(b) Profit is the reward to the entrepreneur in a market economy. Profit can vary enormously both across products and over their life-cycles. The typical modern product involves the outlay of huge amounts of money on plant, factory space, overheads and above all marketing. Most of this outlay comes well before anything is earned in revenue. Entrepreneurs are thus risk takers and deserve a reward if they are successful. If the entrepreneur had no incentive then few risks would be taken and the economy would stagnate. Profit thus acts as a motivator to entrepreneurs and also to workers who can benefit from profit-related pay. It is very unlikely that people would buy shares in companies if there were no chance of a dividend!

The key points have been dealt with first. Mark schemes in exams have these points as most important, with minor points possibly earning fewer marks.

Profit gives signals to markets, helping them bring about the efficient entry and exit of firms. Abnormal profit will encourage potential entrants while losses will encourage firms to leave an industry. Assuming that entry barriers are low, profits will thus help to bring about an efficient allocation of resources. Profit plays an important part in the 'invisible hand' of free market economies. Resources are drawn towards the production of goods and services where profits can be earned, i.e. those goods which are in demand.

The success of the private sector is crucial to the well-being of the public sector. If the private sector becomes too small, its ability to generate the tax revenue to finance public services will be called into question.

Profits also provide funds for new investment and for research in a firm. This can contribute to increases in economic growth and living standards. As profits are taxed by the government, they help to provide revenue for spending on merit goods such as education and health. Profit generated in the private sector helps to provide important services in the public sector. A country has to generate income, partly in the form of profits, to be able to afford good public services.

General comments

Often students see economic rent and transfer earnings purely in the context of labour and not other factors of production. It is important to link normal profit to transfer earnings, for example. There is also the issue of whether economic rent should be taxed. These points illustrate the need for students to avoid putting their work into little isolated areas of knowledge and understanding; an integrated approach to learning is important. In other words, avoid compartmentalisation!

Related questions

- 1 (a) Distinguish between transfer earnings and economic rent. (5)
(b) Explain with examples how factors of production can earn both transfer earnings and economic rent. (10)
(c) Discuss the view that economic rent should be subject to a 100% tax. (10)
- 2 Why do accountants earn more than road sweepers? (25)
- 3 (a) Distinguish between normal profit and abnormal profit. (5)
(b) Why is abnormal profit earned in some markets in the long run but not in others? (20)

Essay 15

- (a) Explain what is meant by the marginal product theory of wages. (10)
- (b) Examine the value of the theory in explaining wage levels in the United Kingdom economy. (15)

Tackling the question

The first part of this essay is quite challenging. **MRP theory** is closely linked to the concept of **diminishing returns** to a factor – in this case labour. Diagrams are vital to give clarity to your explanation. Part (b) asks you to apply the theory to wage determination in the UK economy. There are a number of limitations to the application of MRP theory to the real world and this should be the basis of the answer. However, it is important to remember that MRP theory does have some relevance to wage determination.

Answer

(a) **Marginal product** (MP) refers to the addition to the total product or output which occurs when one additional unit of a variable factor, in this case labour, is added to a fixed factor. MP initially rises (but then falls, due to diminishing returns setting in), whilst total product rises at a decreasing rate. MP multiplied by marginal revenue produces the **marginal revenue product** (MRP). The analysis assumes perfect competition, perfect labour mobility and homogeneity of the labour supply. Utilising the MRP curve for labour, it is possible to derive the marginal productivity theory of wages.

In Figure 1, the demand curve for labour is that part of the MRP curve below the **average revenue product** (ARP) curve, marked AB. The ARP curve represents the average monetary return per unit of labour employed; the portion of the MRP curve above this is not relevant because no firm will employ labour when the wage is higher than the ARP of labour, as it would be making a loss on units of labour employed. Due to the competitive assumption, the supply of labour to the firm will be perfectly elastic at the market-determined

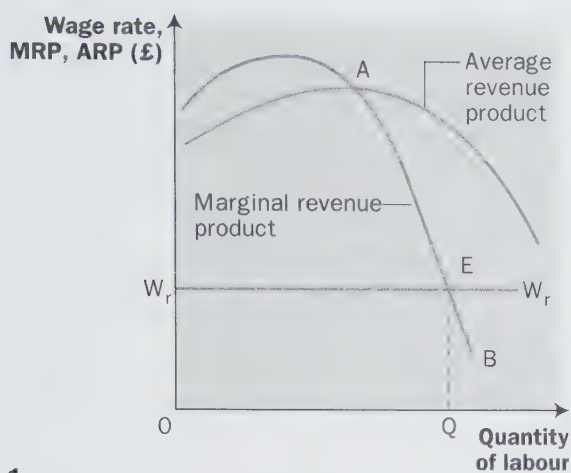


Figure 1

wage rate W_r . The profit-maximising entrepreneur will employ additional labour up to OQ; below this point, the MRP is greater than the wage rate and he or she would gain by employing more labour. Above this point, the wage rate is greater than the MRP and the entrepreneur will lose by employing more labour. This approach is consistent with the concept of the entrepreneur equating marginal cost with marginal revenue in order to obtain the profit-maximising output. At point E, the wage rate (W_r) equals MRP, assuming labour is the only variable cost.

(b) The theory, however, only indicates the quantity of labour demanded at a given wage rate, but does not say how the wage rate itself was determined; it is, therefore, a theory of demand for labour rather than a theory of wage-determination. It indicates that the demand for labour is derived from the demand for the product which labour produces and, to the entrepreneur, reflects the value of the labour resource in the productive process.

This does not mean, however, that the theory has no uses; it does help to predict the outcome of changes affecting the firm and its

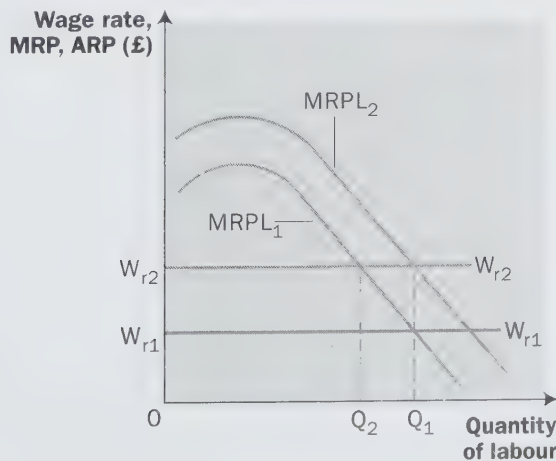


Figure 2

Can you draw these curves and explain them? Remember that the marginal revenue product curve should cut the average revenue product curve at its highest point.

labour force. In Figure 2, for example, an increase in the wage rate from W_{r1} to W_{r2} reduces the quantity of labour demanded from Q_1 to Q_2 , ceteris paribus; however, if the MRP curve shifted outwards to $MRPL_2$, then it may be possible to retain the labour force unchanged at Q_1 . Such a shift in the MRPL curve may come about as a result of increased productivity, which could be due to improved technology, more investment or changes in working practices (such as the abandonment of restrictive practices). Alternatively, the curve may shift as a result of an increase in the market price of the output which labour produces. Under perfect competition, price = marginal revenue and is the same for each worker employed. Hence, the curve shifts out parallel to itself.

The main limitations of the theory are that it ignores supply conditions in the labour market and that it makes the competitive assumption. The labour market is not a single homogeneous market, but consists of thousands of different markets, each with its own supply curve, the elasticity of which will depend upon factors such as the degree of skill and training required and the length of the training period for the particular occupation. Hence knowledge of the marginal revenue product of labour is necessary but not sufficient to determine wage levels. In the UK, equilibrium wage rates are determined by the interaction of the demand and supply of labour. Since the conditions governing demand and supply vary between each labour market, the nature of the equilibrium wage rate will vary accordingly.

What factors determine the elasticity of supply of labour? The supply of labour is much more elastic for unskilled jobs where there are low barriers to entry to that particular occupation. This usually means that the training time is short and the skills required are fairly low.

Figure 3 illustrates the use of MRP theory to derive the demand curve for labour. However, equilibrium wage rates cannot be determined without knowledge of supply conditions which, in turn, govern the position and elasticity of the supply curve. If the supply curve is substantially inelastic, because the type of labour is skilled, the equilibrium market wage rate is OW_1 . However, a more elastic supply curve (representing, for example, unskilled labour) would result in

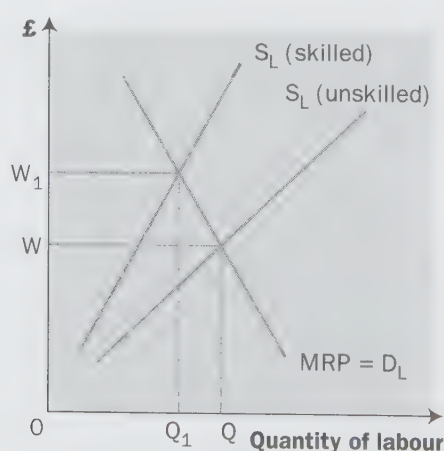


Figure 3

a lower equilibrium market wage rate of OW, despite an identical MRP (demand) for labour. The MRP theory cannot, therefore, determine a market equilibrium wage rate. In other words the theory has limited predictive capabilities.

Another limitation of the theory is the assumption that MRP can be precisely calculated. In the real world, it would be either impractical or difficult to measure precisely the MRP of every particular type of labour. A general theory of wage determination based on such a precise measure (given that the labour market is both heterogeneous and imperfect) would be inadequate to deal with occupations supplying services, e.g. teachers, nurses and many other public sector employees. With one-third of the UK workforce in the public sector and an increasing trend towards tertiary employment, measurement of MRP in practice would be difficult.

In the UK economy, many workers are members of trade unions which can monopolise the supply of certain categories of labour. Also, many employers are members of employers' associations which can monopolise the demand for labour. In the past most wage bargains were made at a national level between these powerful groups. The wage bargain which was struck reflected the relative strengths of the parties at that particular time in the negotiating process. This 'collective bargaining' was the way that most wages were determined in the UK economy. With the decline in the power of trade unions nationally in recent years, wages are increasingly determined at factory/plant level. The present government supports this trend because local pay bargaining means wages reflect local labour market conditions more accurately. Wage determination can also be affected by government legislation and intervention in the economy. Legislation which affects wage rates includes the Sex Discrimination Act 1975 and the Equal Pay Act 1970. Intervention may be in the form of a statutory or voluntary incomes policy which, for a period of time, will influence wage bargaining by establishing a 'wage norm' applicable across different occupations, thereby suppressing the normal collective bargaining processes. The introduction of the minimum wage will have similar effects.

Despite the limitations of the theory, however, it does contain a number of inescapable truths, in particular that any wage increase which is substantially greater than the rate of increase in productivity will result in a reduced labour force. It is also probable that MRP theory underlies all wage bargaining and determines the relative strengths of the two parties in the negotiating process. MRP theory may not be explicitly recognised during wage bargaining, but this does not mean that it is an insignificant factor underlying the process of wage determination. However, a comprehensive approach, given

Bring in examples from the real world. Despite the help given to women and ethnic minorities by legislation, prejudice has tended to impose a 'glass ceiling' on many talented people reaching top positions in industry and commerce.

National collective bargaining is seen by many labour market economists as likely to impede labour market efficiency because it does not consider local labour market conditions. The

demand and supply of labour for a particular occupation may vary between different regions of the country and thus national wage bargaining is inappropriate.

labour market imperfections, would be to recognise the significance of market forces, collective bargaining and government intervention (through legislation and as an employer in the public sector) in the determination of wages within the UK economy.

General comments

An understanding of MRP theory is vital in any work on labour markets. Why is the MRP curve steeper in some labour markets than others? Why does it shift position? What factors determine the elasticity of supply of labour? What is the impact of there being a monopoly supplier of labour in a market? What effect does a monopolist buyer of labour have on wage rates?

Related question

- (a) What factors determine the wage rate in a particular occupation? (15)
- (b) How far is it true to say that the activities of trade unions significantly affect wage rates and employment levels? (10)

- (a) Define what is meant by 'economic rent'. (15)
- (b) Explain why it is sometimes argued that taxes should be imposed upon economic rents. (10)

Tackling the question

Economic rent is a well used concept in economics. The important thing to remember is that it does not just apply to the labour market. It can also be applied to land and the entrepreneur. As any economic rent earned by a factor of production implies some form of **surplus or excess**, the implication is that it should be taxed. If a firm makes **abnormal profits**, should they be taxed at a rate of 100%? Part (a) requires a detailed explanation of economic rent. It has a high mark allocation and this means covering its application to other factors, not just labour. The analysis in part (b) is likely to centre on the view that, as long as any tax on economic rent leaves a factor of production earning more than its **transfer earnings**, resource allocation will not change.

Answer

Guidance notes

(a) **Economic rent**, as described by **David Ricardo**, is the return to a factor of production which is in fixed supply, usually discussed in the context of land. It should be distinguished from the everyday concept of commercial rent, which is more akin to a hire charge for the use of an asset, usually the payment made by a tenant to a landlord. Ricardo asked: if the supply of land is fixed and cannot be increased or reduced, what then determines its price? As the supply of land cannot change in response to a change in demand, it has no supply price (the supply price being the minimum return necessary to retain a factor of production in its present use). Any payment to a factor of production which is above the supply price is a surplus and this surplus is known as economic rent. As the supply of land is perfectly inelastic and cannot be varied, then the whole of the landlord's income may be considered as economic rent.

During the Napoleonic wars, Ricardo noted that many people were blaming the high price of grain on the price of agricultural land.

Make sure you go into depth here. Economic rent is a wide-ranging concept and requires detailed analysis. In many students' notes it rates only a small definition when in reality it is relevant to a lot of work on resource allocation.

Ricardo, however, pointed out that, as the supply of land could not be varied with demand, this could not be the case. In fact, the demand for land was derived from the demand for grain and, as the demand for grain was high, its price was high, enabling higher rents to be charged to tenants, i.e. price determines rent rather than rent determining price. If, on the other hand, the demand for grain fell, the landlord could not reduce the supply of land in order to maintain the level of rent; it would still be there whether he took some return or zero return. This, of course, makes the unrealistic assumption that the land can only be used for growing grain and has no alternative uses, and that the whole of the return to it is, therefore, economic rent. In reality, it may be possible to transfer the land to an alternative use, such as potatoes or building. Hence, in practice, not all of the factor income earned by land is economic rent.

The concept of rent can also be applied to those talents of individuals which are unique or, at least, in very scarce supply (for example, great actors, brain surgeons or sports personalities). Such individuals are said to earn **rents of ability**. Such rents of ability may also apply to very successful entrepreneurs, such as Richard Branson, who founded the 'Virgin' companies which have made him a multi-millionaire. Figure 1 illustrates the situation of pure rent for such individuals with unique talents. The supply is fixed at OQ with income OP.

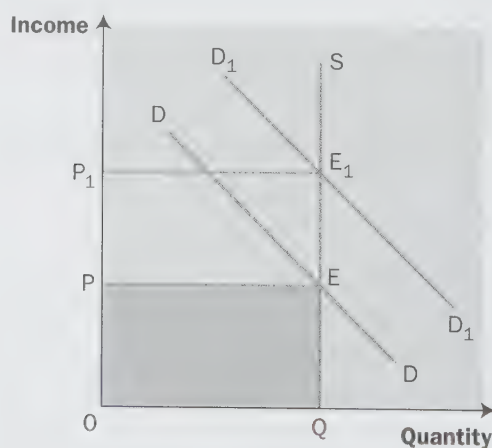


Figure 1

The whole of the return is rent, i.e. OPEQ, assuming that the individual has no alternative occupation. An increase in demand increases the rent to OP_1E_1Q – all of the additional return is rent as the supply has remained unchanged at OQ. Rent in this context is a surplus and is the difference between the current earnings of a factor and its supply price.

It is possible for rent to be earned in the short run where factors of production are in temporarily fixed supply: for example, where there is a temporary shortage of a particular type of skilled labour, such as computer programmers. Rent will be earned by those already

in the industry, but the element of rent in earnings will only persist as long as it takes to train new programmers and the rent element will then be eliminated. Such rents which exist in the short run are known as **quasi-rents**.

In reality it is rarely the case that a factor is specific to a single use only, as in the pure rent case. As mentioned above, land can be transferred to alternative uses, or occupations can be changed. The minimum payment which is necessary to prevent a factor of production from transferring to its next best alternative use is referred to as its transfer earnings, a similar concept to opportunity cost. For example, a pop singer earning £1,000 per week who has also trained as a mechanic (where he or she could earn £200 per week) would stay as a pop singer at any wage over £200 per week, but would revert to being a mechanic at less than £200 per week. The current earnings will be part rent (£800) and part transfer payments (£200). Whenever there is an upward-sloping supply curve, part of the current earnings will be transfer earnings and part economic rent. The greater the elasticity of supply, the more the earnings are transfer payments and the less is rent; the less elastic the supply, the greater the rent element until, in the extreme case of fixed supply (i.e. zero elasticity) all the earnings are rent. In Figure 2 earnings are equally divided between transfer earnings and rent. Clearly economic rent is closely related to elasticity of supply.

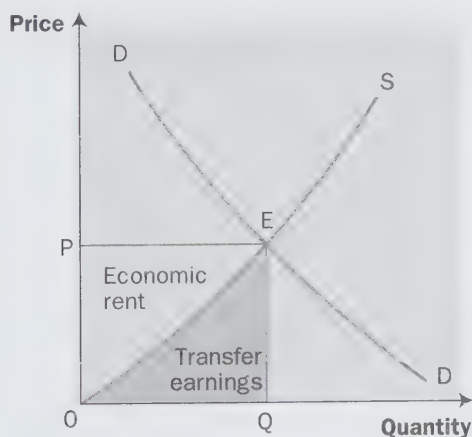


Figure 2

Essential diagram! An important point is that Transfer earnings + Economic rent = Total earnings.

(b) Due to economic rent being earned on factors which are in fixed supply (the returns to the owners of these factors rising without any extra efforts by the owner), it has been suggested that taxes should be levied on economic rents. This suggestion was very popular in the past and particularly in the USA in the early nineteenth century, where the tax movement of **Henry George** advocated a tax on the 'unearned increment' which accrued to owners of land, which, he argued, should be used to finance all government expenditure.

Use relevant examples. Have the privatised utilities been earning abnormal profit? If so, the windfall tax is an entirely fair way of taking some of it.

The idea of a tax on economic rent arises from the fact that the supply of land is fixed and, if the returns to land are reduced, the landlord cannot reduce the supply. If an equal percentage tax were imposed on all land uses, then the relative profitability of different uses would remain unchanged and land would not, therefore, be reallocated to alternative uses. As the supply of goods produced on the land will be unchanged, the price will be unchanged and the tax cannot be passed on to consumers. Farmers using the land will pay no more than they did previously, prices of produce and commercial rents will be unchanged and the whole burden of the tax will fall upon the landlord. The same argument has been advanced for taxing away the rent element in the earnings of highly paid individuals, such as pop stars and soccer players, on the basis that they enjoy what they are doing and, provided their earnings stayed above their transfer earnings, they would continue to do the same work. The three closest examples of UK taxes on economic rent are capital gains tax and North Sea oil royalties, plus the 'windfall' tax on bank profits in 1982 and also on the privatised utilities in 1997. Some economists are currently arguing for the abolition of capital gains tax on assets held for over three years.

In Figure 3 the firm in an imperfect market is making abnormal profit (the shaded area). This is the difference between average revenue (AR) and average cost (AC) multiplied by the quantity sold. Only normal profits are required to keep the firm in its current activity and thus in theory the government could tax away all the abnormal profit without affecting resource allocation. Normal profit being the transfer earnings and abnormal profit being the economic rent.

The proposal to tax the rent element in earnings has to cope with the problem of correctly identifying the element of rent and of transfer earnings for a wide variety of occupations and individuals in order to avoid taxing transfer earnings, which would result in

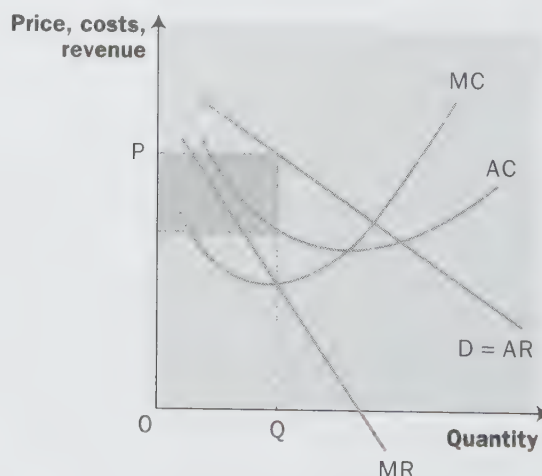


Figure 3

The profit-maximising firm will produce where $MR = MC$, and abnormal profit is earned when average revenue is greater than average cost. When $AR = AC$ only normal profits (transfer earnings) are earned.

people changing their occupations. Due to the practical difficulties involved, therefore, the once-popular idea of taxing away economic rents is seldom advocated today. The concept of economic rent, however, is encountered in virtually all modern urban areas, as land values rise with population growth, increasing the demand for housing.

General comments

Transfer earnings and economic rent have useful applications in the labour market. In occupations where the proportion of earnings made up of economic rent is high, salaries are also likely to be high. This is linked to the elasticity of demand and supply of labour. Where demand and supply elasticity are inelastic, then economic rent will be a high proportion of earnings. Lawyers earn more than road sweepers for this reason.

Related question

- (a) Briefly distinguish between transfer earnings and economic rent as they apply to the labour market. (8)
- (b) Using the above concepts, explain why doctors earn more than refuse collectors. (17)

Essay 17

What are the cases for and against a national minimum wage in the UK?

(25)

Tackling the question

This is a topical question with the present government committed to the introduction of a national minimum wage, bringing the UK into line with most developed economies. The essay needs to start with a bit of background to minimum wage policy in the UK. The cases for and against must be carefully presented with appropriate diagrams. It is important to note that the question is about a **national** minimum wage, not a regionally or occupationally based scheme.

Answer

To begin with, let's define what is meant by 'minimum wage'.

A **national minimum wage** is a legally enforceable minimum hourly payment that employers are obliged to pay to employees. UK workers do not currently enjoy such a legal right. Until recently some groups of UK workers in low-paid occupations were protected by Wages Councils. These bodies set minimum pay levels in jobs such as hairdressing and retailing. However, all but one of the Wages Councils were abolished during the 1980s and 1990s. The agricultural workers' Wages Council was the only one retained.

Moving quickly on to some of the advantages.

The basic argument for a national minimum wage is derived from the wish to improve the living standards of working people. Given that the purchasing power of a wage falls if there is inflation, it would be necessary to index-link a minimum wage to maintain its purchasing power. In a sense, then, the benefits extended by a minimum wage policy to lowly-paid members of society are part of a broader aim of redistributing income in favour of the poor.

While the basic argument can be presented and justified on social and humanitarian grounds, a second line of argument is specifically economic: workers are exploited by their employers. They are paid less than they deserve for the work they do. When marginal

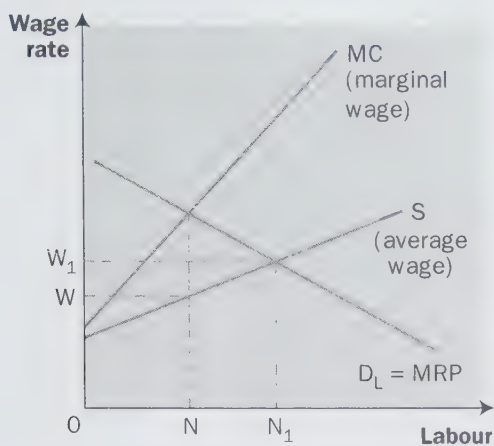


Figure 1

productivity theory is applied to a monopsonistic employer of labour, analysis shows that the employer equates marginal revenue product (MRP) with marginal cost (MC). In Figure 1, ON workers are employed at a wage rate of OW . This wage rate is less than the workers' MRP. If MRP were equated with average cost/labour (S), the wage rate would be higher (OW_1) and so would be employment (ON_1). A tenet of Marxist economics is that all value is created by labour power. A part of the value – surplus value – is expropriated by capitalist employers. In this analysis, a minimum wage could be seen as providing some small abatement of the expropriation.

Wage differentials and the hierarchical structure of rewards and status they produce are a prevalent feature of the UK labour market. They also cause friction and rivalry between different groups of workers. Attempts by workers to maintain wage differentials can exert inflationary pressure upon costs in the economy. If a minimum wage reduced differentials, it might also relieve some of the tensions and help constrain inflationary tendencies. It can also be argued that a national minimum wage would have exactly the opposite effect.

The following arguments can be made in opposition to the concept of a national minimum wage.

Firstly, if it is held to be appropriate and necessary, on grounds of efficiency, that wage rates should be determined by the interaction of the market forces of demand and supply, then the whole idea of a national minimum wage must be rejected as a distortion of market forces that would result in a misallocation of labour resources.

Secondly, if the new wage is fixed above the market level for particular jobs, then, as revealed in Figure 2, the result would be excess labour supply and unemployment. OW is the equilibrium wage with employment at ON . If the new wage is set at OW_1 , the level of employment falls to ON_1 . The brunt of the unemployment would be borne by the most lowly-paid members of the community, i.e. the unskilled and the young.

In a subject like economics, it is good to use diagrams wherever possible to supplement the text – they show the examiner that you have a technical command of the subject and are a good way to provide a concise representation of a theory. Remember to refer to the diagram in your text – don't just draw it and ignore it.

And now some disadvantages.

Let's have another relevant diagram – again cross-referenced in the text.

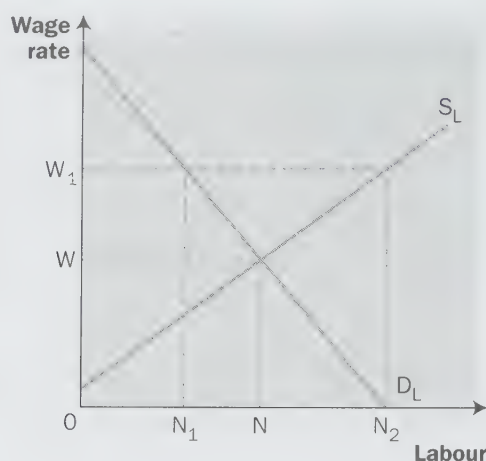


Figure 2

Thirdly, as labour would become relatively more expensive, there would be encouragement for firms to substitute capital for labour.

Fourthly, employers would be tempted to avoid minimum wage legislation by, for example, creating more part-time work. Workers themselves might conspire with employers by accepting less than the statutory wage. Much depends upon the level of unemployment and how desperate the unemployed become. Another device for avoiding the legislation would be for 'self-employed' workers to hire themselves out for less than the minimum national wage.

Fifthly, a national minimum wage might not have any redistributive effect. Workers already earning at or above the minimum wage would, in all probability, resent the erosion of wage differentials and would, through their trade unions, seek to negotiate pay increases to maintain their relative position in the pay hierarchy.

Sixthly, the restoration of wage differentials described in the paragraph above would raise the level of industrial costs. This could have a variety of consequences: a fall in profits and, maybe, a decline in the level of aggregate investment; an increase in prices as cost increases are passed to the consumer and, therefore, less competitive exports, greater import penetration and, eventually perhaps, deflationary economic policies; and the erosion of any increases in real incomes brought about by the introduction of a national minimum wage.

Notice that the 'arguments against' have been listed as **firstly, secondly** etc. This is purely functional, as it helps to separate out the different arguments if there are quite a few of them. It is not a very pretty way of writing, but sometimes it can be better than writing a whole string of 'Furthermore ... and ... and ... What is more...' etc.

Notice, also, that there is no conclusion. I suppose you could put one in if you really wanted to, but the question has not asked for one. It has just asked for the case **for and against** – not an 'assessment' or 'evaluation'.

General comments

This area of the labour market section of the syllabus has been very popular in examination questions in recent years. It is important to know how a regional or occupational minimum wage might affect labour markets. Does the introduction of a minimum wage cause unemployment? Is a monopsony in a labour market likely to strengthen the case for a minimum wage? At what level should a minimum wage be set – should it be at half of median male earnings?

Related question

- (a) Explain what is meant by (i) monopsony (ii) monopoly in a labour market. (10)
- (b) How do monopsony and monopoly affect wage and employment levels in labour markets where they exist? (15)

Essay 18

Examine the arguments for and against the free market solution to economic imbalance between the regions.

(25)

Tackling the question

Besides dealing with the cases for and against a 'market' solution to the regional problem, it is very important to mention the nature of the regional problem in the UK and how it has changed in recent years. Essays of this kind need plenty of structure and need to stick to the question – unstructured essays do not discipline students as to what to write in the same way as structured ones (those divided into parts). A well-organised plan is essential!

Answer

Essential background! Many countries have a regional problem with quite significant differences in income and wealth between areas. For example, the north and south of Italy and many states in the USA have major disparities in incomes and living standards.

Regional economic imbalance has its origins in geographical, technological and historical causes. A major factor in the UK has been the decline of former staple industries, particularly cotton, coal, shipbuilding and steel. The problem becomes a regional one as these activities tend to be concentrated in the regions, originally because these areas offered sources of power and raw materials. The comparative advantage enjoyed by the regions in these lines of production has, however, been lost due to a combination of technological change (particularly power sources), the introduction of substitute goods, the growth of overseas competition and declining markets. The development of new industries has taken place elsewhere, largely as a result of different requirements for power and access to markets. Much of modern industry uses electrical power and (with the largest market in terms of purchasing power being the south-east), there has been a tendency to locate away from the declining areas. Hence, the centres of economic activity have tended to shift, whilst much of the population remains located as in the past. The result is a problem of regional disparities in employment and living standards. In the post-war era, governments have sought to overcome the regional problem with intervention in the form of grants, subsidies and directives; an alternative approach, however, which some authorities advocate, is to allow market forces to overcome the problem.

Those advocating the free market approach suggest that regional unemployment indicates a labour market disequilibrium with an excess supply of labour at the ruling wage rate, the ultimate solution being to reduce real wages and hence product prices and re-establish equilibrium in the labour market. The underlying principle is that economic units, labour and capital, should be free to make their own decisions regarding work and location. If there is high unemployment in a region, this will be reflected in lower wage rates; labour will then seek higher wages in other more prosperous regions. Lower wage rates in the declining regions will (at some point) become attractive to firms making location decisions, which will see an opportunity to reduce their costs by moving from the prosperous high-wage regions to the less prosperous regions. In this way, by the movement of firms and labour, in the long term a new equilibrium situation will be established. If workers choose not to move, then there must be some other equalising advantage which outweighs the employment disadvantages. If other firms fail to move, then the same reasoning applies – some other advantage to the firm must outweigh the benefits of lower wage rates and a plentiful labour supply. The argument is, therefore, that there are no grounds whatever for government intervention. Any attempt by government to interfere (for example, with a firm's location decision) would, according to the market approach, result in a non-optimal location. The firm makes its location decision on the basis of cost minimisation and any interference with this will result in a situation other than the optimal one which the firm would have chosen.

The market approach also has ideological appeal to those who believe that government intervention in the economy should be minimal and who point to the implications for taxation, subsidisation and bureaucratic controls, all of which impose burdens in themselves.

The arguments in favour of the market approach assume that markets operate smoothly and without friction, and it is precisely because of their failure to do so that the case against the market solution arises. In particular, the assumption that regional disparities in employment levels will be reflected in differences in wage rates must be questioned. In reality, the widespread use of nationwide collective bargaining, by which the national representatives of a union negotiate a wage rate which applies nationally to a grade of labour or to an industry, reduces the sensitivity of wage rates to regional disparities in employment rates. In addition, unemployment and other social security benefits have narrowed the gap between what is received out of work and post-tax earnings from employment, which creates a further friction on market forces and makes a market solution less likely.

The case 'for' relies on the smooth operation of the labour market. In practice this is easier said than delivered in a complex economy.

The case 'against' recognises the difficulty of applying free market ideas to this problem. The reason why regional aid was available for so long to several areas in the UK was recognition that free market forces alone could not reduce the regional imbalance.

Even with a frictionless market, government intervention would be justified if private and social costs and benefits diverged (due to the existence of externalities), and the socially optimal location may differ from the optimum from the point of view of the individual firm. When making a location decision, the firm will take account of only those costs which affect its own profitability, but its location decision may involve external costs that devolve upon others, both firms and the community. The location of an additional firm in a high employment area may put upward pressure on wage rates, making it difficult for other firms to attract or retain labour. There may also be additional congestion costs as road and transport facilities become more intensively used. Land prices may also rise as competition increases for urban and industrial usage.

Further social costs may be incurred in the expanding areas due to the shortage of (against the increased need for) social facilities such as schools, hospitals and sports centres. At the same time, there will be costs in the declining regions as labour departs, because such facilities already provided would be under-utilised. In addition, there would be problems of urban decay and falling property prices in the declining areas, and property shortages and escalating prices in the growth areas.

The argument that firms' costs will be adversely affected by interference in the location decision is also open to challenge on the grounds that there is substantial evidence that the location decision does not have a significant effect on the costs of most modern manufacturing companies. Estimates indicate that approximately 70% of manufacturing can be considered as 'footloose', i.e. their costs are not significantly influenced by location.

As workers leave an area, there are two additional effects on the regional market which actually reduce the likelihood of firms being attracted to that region. Firstly, the reduction in the region's population reduces the size of the market, making it a less attractive prospect for firms. Secondly, this is compounded by the downward effect of the 'regional multiplier', which suggests that spending power declines as population leaves the area. The total effect of the reduction in spending is greater by some multiple of the initial reduction, estimates suggesting that the effect is between 1.5 and 2.0 times the initial reduction in spending power. The market, therefore, becomes increasingly depressed and is unlikely to appear attractive to firms. The quality range of the workforce in the depressed regions may also deteriorate because the first to leave are likely to be the young and most highly skilled, leaving a workforce which cannot as easily attract a wide range of commercial and industrial activities, despite lower than average wage rates.

Implementation of government policy at the macroeconomic level may be hindered by wide disparities in regional unemployment rates. For example, in a period of inflation the government may wish to deflate aggregate demand, which may be a reasonable policy as far as the prosperous regions are concerned, but may create a much

greater problem for those regions already depressed. Recent attempts in the early 1990s to slow down aggregate expenditure through a policy of high interest rates have highlighted this problem. Rapid demand expansion fuelled inflationary pressures, particularly in the south-east, but the other regions benefited from demand expansion only after a time lag. So when interest rates were raised, they received a check to much needed expansion, just when it was making an impact on their regional employment and prosperity.

In addition to the mainly economic arguments put forward so far, there is also the social problem of the hardship which may have to be endured over long periods by the unemployed under any market solution, a problem which governments may find difficult to discount entirely. It is, therefore, unlikely that any government in a modern economy would attempt to adopt a purely market solution to the regional problem, and the argument generally concentrates rather on the actual extent of government involvement. It is important to note that many economists now see the UK's regional problem as **intra**-regional rather than **inter**-regional. This means that the employment and living standard differences are most pronounced between towns/areas in the same region, not between the regions themselves. There are prosperous towns in depressed regions, e.g. Clitheroe in the north-west, and depressed towns in prosperous regions, e.g. Chatham in Kent or Tower Hamlets in London. The severe recession of the early 1990s also hit the prosperous south-east very hard, and unemployment rose faster there than in some of the traditionally depressed regions such as the north-east.

A conclusion that updates the position. The traditional north/south divide may be a thing of the past. With regional policy now far less important in terms of government expenditure, the most active work has been persuading multinational companies to locate in depressed regions.

General Comments

Regional problems have now become much more intra-regional with differences often being more pronounced within a region than between UK regions. It is also important to remember the European dimension to this problem. There are significant regional disparities in the EU and these may intensify as membership expands eastwards. The EU has a regional policy which concentrates on improving the economic environments of poor regions so that private investment is attracted to them. To date the main recipients of these in-funds which help with retraining and infrastructure have been Greece, Portugal and Ireland.

Related question

What factors will a firm consider when deciding on the location of its activities? (25)

Essay 19

- (a) Distinguish between consumption goods and investment goods. (8)
- (b) Explain, from the point of view of both the individual student and the state, how you would classify higher education. (17)

Tackling the question

This is an unusual question and needs a careful approach, otherwise part (b) could descend into waffle. In part (a) a decent definition of each term should secure the marks available. It is important to bring in the term **human capital** in part (a) because it is obviously relevant in part (b). Part (b) asks you to apply consumption and investment to higher education, i.e. degree level. The concept of opportunity cost is important here. Careful planning is required because this is not an essay which can immediately be drawn from a few pages in your notes.

Answer

A separate paragraph for each. Remember that if few investment goods are produced, the productive capacity of the economy may not grow fast enough to meet future consumer good demand. Remember to bring in human capital to link the two parts of the question.

(a) **Consumption goods** are bought by households in order to satisfy immediately and directly an economic want, being commodities or services which are used for their own sake. Bread is an example – it satisfies immediately and directly the need for nourishment. Consumer durables are consumption goods from which households can derive a future stream of utility. TVs, videos and washing machines are examples.

Investment goods are produced, not for their own sake, but because they facilitate the production of more consumer goods in the future, by replacing and adding to the existing stock of capital goods (investment goods already created). To the economist, they are newly-created capital goods. Investment goods take many forms. Fixed industrial investment involves the creation of new machinery, plant and factories. Fixed social investment is the creation of new schools, colleges, hospitals, sports centres, etc. Public fixed investment takes place when reservoirs, airports, roads and general infrastructure projects are undertaken. Investment goods are generally, therefore, physical or real commodities. Any decision to allocate scarce resources to the production of investment goods (in order to

increase future consumption) involves sacrifice of present production of consumer goods for immediate use. These characteristics apply to human capital formation.

(b) Human capital is the stock of skills, knowledge and abilities possessed by the population. Acquisition of new skills and knowledge through training, research and higher education can be regarded as human investment and, thus, a legitimate form of investment goods. For the individual, a decision to undertake higher education requires an economic choice to be made between present and future consumption; an opportunity cost, therefore, exists in a similar way to the choice involved in making a physical investment.

The individual will have to allocate time and effort to study at the expense of the next best alternative pursuit. Where full-time study is undertaken, the next best alternative would be full-time employment and the possible earnings (less grant) represent a monetary measure of the immediate cost of full-time study. However, a measurement of the opportunity cost of further education would also have to include the anticipated life-time earnings that the person would receive, if he or she did not undertake further education, against the life-time earnings anticipated following full-time study. By definition, as life-time earnings represent income receipts in the future, they should, therefore, be discounted using a discount rate. Thus, to the individual, full-time higher education can be quantified, albeit crudely, using the same methods as those for a physical investment, namely discounted cash flow. One such method would be **net present value**, the formula for which is:

$$NPV = \sum_{i=1}^n \frac{\text{Net annual return}}{(1 \pm r)^i} - K$$

In the case of higher education, the net annual return would be the net difference between the income received after higher education and the income received with no higher education in each year of the working life of the individual. K , the initial 'capital cost' of higher education, would be the earnings which the person could have received had he or she been in full-time employment (minus grants received), during the period of full-time study; r would be the discount rate by which each net annual return would be discounted to express it in present value terms. All discounted net annual returns would then be summed and the initial capital cost subtracted to arrive at the net present value (NPV). If the NPV were positive, then this would indicate that the decision to undertake higher education was justified. If the NPV figure were zero, this would indicate that the individual is no better nor worse off than had he or she not under-

An individual, by going to university, forfeits the earnings he/she could have earned from full-time work during the three-year course. There is clearly an opportunity cost for young people.

taken full-time study. If the NPV were negative, the individual would have been better off not undertaking higher education and instead embarking on full-time employment from the outset.

Thus, for the individual, the underlying rationale is that investment in full-time study will be beneficial when the net personal return is sufficient to justify that investment. Clearly, measurement of the profitability (or return) on human investment is at best imperfect and some might disagree with the methods and terminology used in assessment. Despite these defects, an estimation of the return on education is not without merit, given such defects do not in themselves suggest that no measurement should be undertaken, merely that, in any decision to undertake higher education, both measurable and non-quantifiable factors should be considered.

A more general approach which an individual might adopt to estimate the profitability of full-time study at university would involve a comparison between the observed earnings of individuals already graduated in different age brackets and those who did not go on to university, in a particular type of occupation for which the degree might be suitable. The earnings differential provides a guide to the earnings increase which the person might expect to receive at each stage of his or her working life (i.e. as he or she progresses through each age bracket). Although this may be a difficult task to undertake at a practical level, it serves to illustrate the need to treat higher education as an investment decision and to take into account the effect that decision has on the future consumption/income of the person concerned.

Deal with the individual first then the government – both should gain from high-quality higher education. Higher education is a **merit good** which gives positive externalities to society. Should it thus be subsidised? At present students going to university face years in debt following their graduation.

To facilitate higher education, the government would have to allocate resources to create physical investment (in the form of colleges and universities) and allocate manpower to education – lecturers and administrative staff. Social investment will, therefore, take place. A government decision to allocate more resources to higher education would imply that the government regarded higher education as a form of social or human investment from which it anticipates a net social return sufficient to justify its decision. If the educational sector is to be organised efficiently, the net social return of the marginal pound's worth of expenditure must be the same for all types and levels of education. It follows, then, that the government will try to ensure that this net social return criterion is observed.

The procedure would be similar, but not identical, to that previously outlined for the individual. The difference would be that the government would have to consider wider social costs and benefits, some of which may be measurable (e.g. the increase in monetary earnings), others less concrete (e.g. the effects on mobility and motivation of labour). This method would, therefore, involve a social cost-benefit appraisal to establish the net social profit of higher education. Costs would be wider, since they would involve the direct costs of tuition (salaries of lecturers, capital costs of buildings and equip-

ment, etc.), in addition to the private costs to the individual in the form of forgone earnings during study and life-time earnings if study had not been undertaken (these would measure the cost of output that could have been produced). On the social benefits side, account would be taken of the effects on the quality of existing human capacity; technical progress and innovation; improvements in welfare standards and, more generally, the increases in the productive potential of the economy.

Higher education should improve the quality of human capital, thereby enabling the general level of human efficiency and productivity between people who undertake higher education and those who stopped just short of university to be measured. Technical progress and innovation would be enhanced by, *inter alia*, scientific and engineering research which had commercial and industrial applications. Medical research would have welfare spin-offs by improving the general level of health as the diagnosis and treatment of diseases improved, though such benefits are more easily listed than measured.

At a practical level, a number of studies have been made of the educational system. A study by **Morris and Ziderman** concluded, amongst other things, that post-graduate qualifications did not achieve a significant social return for society, but that vocational BTEC qualifications did. If one accepts such findings, one might argue that society would be better off if resources were transferred from post-graduate work to vocational BTEC work. However, the important point regarding such studies is that they view education as a (social) investment good, the appraisal of which involves comparing the future gains in consumption, income, welfare and productive potential against the initial costs of educational provision in order to establish a measurable net social return.

There is considerable debate as to the value of some UK qualifications. A-levels are seen by some as too narrow and 'academic', whereas the GNVQ is regarded as more relevant to the needs of industry.

General comments

Higher education is very often used for A-level questions – funding, opportunity cost, pricing it when tuition is free, etc. These questions can bring the best out of a candidate who is prepared to think laterally. However, they are not the 'bread and butter' style of question that you get on topics such as elasticity or inflation. They can be very costly in an exam if done badly – always look at other choices available.

Related question

- (a) Why is education a merit good? (5)
- (b) If higher education is provided free of charge, use economic analysis to show how a limited number of places are allocated. (20)

**A-Level
Economics:
Essays**

- (a) Why do governments measure the national income of their economies? (12)
- (b) What problems do governments face when trying to measure the national income accurately? (13)

Tackling the question

This is a rather unusual question to ask on national income because very often this topic is examined in conjunction with standards of living. This question will make you think and plan your answer carefully before starting. This can be to your advantage because students often rush enthusiastically into a question thinking it is straightforward and lose track of the main theme. The key words here are **why**, **measure** and **what problems** – keep them in mind when writing your answer. In part (a) make a list of reasons why national income is measured – how many do you need for 12 marks? Probably five or six mentioned and then explained. The same is true for (b) – the examiner will award perhaps one mark for each point mentioned and one or two more for it being developed.

Answer

Guidance notes

(a) **National income** is a measure of the total value of income, output or expenditure in an economy in a given year. The three methods of measuring national income should produce the same result. A rise in national income is seen as a sign of economic growth and hopefully rising living standards.

Governments measure national income to ascertain whether their economy is growing and as a guide to whether living standards are rising, since changes in real national income per head are a useful indicator of changes in living standards. The government can then make comparisons with other countries and have some idea of relative economic performance. The national income figures also indicate the effectiveness of recent economic policies and in what direction future policy should go. Monetary and fiscal policies for the immediate future are based upon trends in the national income figures.

It's important that you play yourself into the question with a good clear introduction. First impressions to an examiner are very important! The key point about national income is that it deals with aggregates in the economy.

The last point impresses the reader by showing that you can pull clear definitions into your essay.

It's a good idea to bring in recent examples from the real world if only to show an examiner that you read a newspaper! The Bank of England now has operational independence over monetary policy in the UK. It has to meet the government's 2.5% inflation target.

It's very useful to bring in these issues at the end, clearly showing that you are aware of the importance of investment to the economy. Governments have set targets in recent years for the level of government expenditure as a percentage of national income.

Always use examples to illustrate a point! Whenever the extraction to production to distribution process takes place, value will be added.

With so many points to make, it's important not to over-elaborate! Make your point and then move on to the next one. There is a very delicate

The national income figures also give the government some idea of the economy's position in the trade cycle – is the economy in recession or near to full capacity? An economy is in recession when GDP falls in at least two consecutive quarters of a year.

If an economy's national income is growing too fast, it may not have the productive potential to meet the demand. In mid-1997 the Bank of England raised interest rates in the UK because it believed that the economy was growing too fast in relation to its productive capacity. The rise in interest rates was designed to reduce demand and lessen the danger of inflation.

Three methods of measuring the national income provide the government with useful information about the overall balance of the economy and whether this balance is changing. The **output method** will show the balance between the primary, secondary and tertiary sectors of the economy. Is deindustrialisation taking place? The **income method** will show the balance between wages, profit and rent in the economy. Are wages claiming an increasing share of the national income? The **expenditure method** will tell a government the balance between consumption expenditure, investment and government expenditure. Is investment a smaller proportion of national income than five years ago? Is government expenditure rising to an unacceptably high proportion of national income?

(b) In order to get accurate national income figures the government faces the enormous cost of trying to get the totals as accurate as possible. Time and resources are used in heavy quantities for what is a challenging task. The problem of double counting has to be overcome in order not to overstate the final figure. If the government counts the value of the output of a logging company which supplies wood to a furniture manufacturer, it could easily count the wood twice if it also counts the total value of the furniture produced. Some form of value-added approach has to be used to overcome the problem of counting a raw material which is an output for one firm and an input for another.

There is also the problem of the 'black' or 'hidden' economy. Many people and firms do not declare income or output so as to avoid paying income/corporation tax. This means that the national income figures are understated because of all of this unrecorded activity. Another problem centres around the treatment of externalities. The

national income figures do not record environmental damage or the depletion of resources. How to value depletion and degradation poses a problem for economists.

Parts of national income accounts are estimates and the government has to estimate as accurately as possible. The value of stocks, owner occupied houses and depreciation are estimated, but how accurate are they? There is also the issue of activity carried out for no payment such as DIY, housework and gardening. Should these be included or at least estimated? If people had been paid by a householder to do these tasks then the incomes would have appeared in national income accounts. The transfer payments paid out by the government such as income support and pensions should be excluded because they are not a reward for productive work. The government faces a dilemma in what should be included in the national income figures and what should be excluded. The national income figures should also be at factor cost not at market prices, because the latter are distorted by sales taxes and subsidies, which are artificial inclusions in the total expenditure in the economy.

Finally, if the government is analysing national income figures over time, then the problem of inflation emerges. The figures can be adjusted for inflation by setting the price level at prices prevailing in one particular year. Thus the UK national income figures for the 1990s could be adjusted for inflation so they are all at '1990 constant prices'.

Thus national income measurement is complex, time consuming, expensive and fraught with difficulties. There are many problems to overcome if accuracy is to be achieved, some of which are surmountable, others only partially so. In the summer of 1997 the government admitted that it had to revise national income upwards following closer examination of the figures. The economy had been growing far faster than the figures had originally shown. The figures are not perfect, but there is bound to be error and omission in a modern, complex economy.

balance to be struck between labelling points and being too superficial.

Now you must write a meaningful conclusion. The conclusion should not repeat previous points, but rather draw together the arguments.

General comments

Many students expect essays on national income to be about the evaluation of living standards. This question asks you to demonstrate the problems of **measuring** the national income and it is very easy to fall into the trap of writing about how problems can arise in the **interpretation** of

national income figures. Questions which do ask about living standards should now discuss the accuracy of the Human Development Index in addition to more traditional measures such as GDP per head.

Related questions

- 1** (a) How would you measure the standard of living in a country? (10)
(b) How can living standards be raised in the long term? (15)
- 2** (a) Distinguish between changes in the cost of living and changes in standards of living. (10)
(b) How might falls in the cost of living help to raise standards of living in an economy? (15)
- 3** What are the causes and costs of economic growth? (25)

- (a) Distinguish between autonomous consumption and income-induced consumption. (10)
- (b) Discuss the factors influencing aggregate consumption in the economy. (15)

Tackling the question

Part (a) of this question is fairly straightforward and a diagram is very important. In fact a **well-labelled diagram** which has been accurately explained will go a long way to scoring a high mark. Part (b) is very open-ended and a large number of factors such as income, interest rates and the availability of credit are clearly relevant. Anyone who can bring in some of the **theories of consumption behaviour** associated with economists such as Friedman will be well rewarded in an exam.

Answer

Guidance notes

(a) Consumption is the act of buying and using goods and services to satisfy wants. Analysis of the behaviour of households taken in aggregate, which is described as consumers' expenditure analysis, forms an essential part of the macroeconomic analysis of national income determination. In this analysis, it is common to refer to aggregate consumers' expenditure as consumption (symbol C). Consumption is the largest component of aggregate expenditure, in the region of 60% in most countries, the other components being investment (symbol I), exports (symbol X), imports (symbol M) and government expenditure (symbol G). Total household consumption expenditure consists of two elements – **autonomous consumption** and **income-induced consumption**. Empirical studies of consumption indicate that the single most important determinant of consumption is income and this relationship is referred to as a consumption function. This can be represented diagrammatically or in algebraic form. The basic hypothesis of the Keynesian theory of the consumption function is that current consumption is determined by current income. Income is regarded as the

Make sure that you are aware of the Keynesian theory of consumption that as income rises so does consumption, but not by as much as the rise in income. The marginal propensity to consume will normally be less than 1.

If the consumption function shifts upwards or downwards, it will be because there are changed conditions in the economy rather than changes in income. These could be changes in interest rates or increased incentives to save introduced by the government.

independent variable and consumption as the dependent variable in this relationship. Hence as income (symbol Y) or disposable income (symbol Y_d) rises, households will increase their consumption.

However, the rise in consumption will be less than the rise in income, hence as income rises the proportion of income spent on consumption falls. The rate at which consumption changes in response to a change in income depends upon the **marginal propensity to consume** (MPC) of households. It is the MPC that determines the amount of income-induced consumption that will take place. Hence, income-induced consumption expenditure is that expenditure which takes place as a result of a change in income and is determined by the value of households' marginal propensity to consume. As an example, if households plan to spend on consumption a given proportion of any extra income they receive, say 0.8, then a rise in income of £100m will induce a rise in consumption of $0.8 \times £100m = £80m$. In this example the $MPC = 0.8$. However, although much of what households spend on consumption is income induced, there will always be some minimum level of consumption expenditure that is independent of household income and would take place, even if income were zero. This minimum level of consumption expenditure on goods and services that is independent of the level of income is referred to as autonomous consumption.

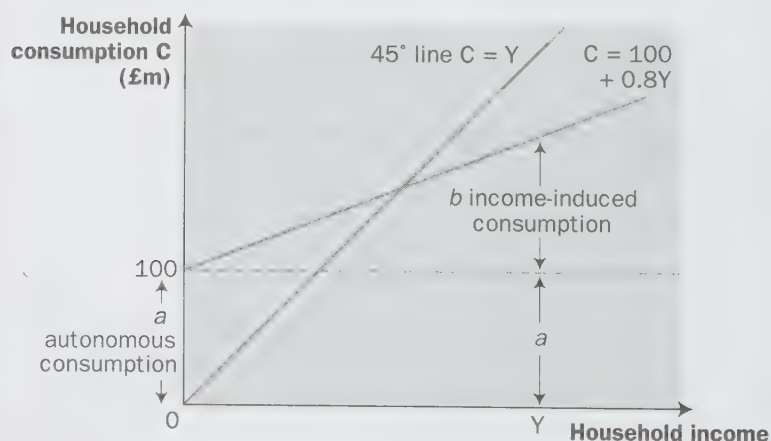


Figure 1

Figure 1 illustrates the two elements of consumption. It depicts an aggregate consumption function in which autonomous consumption is £100m, denoted by the symbol a , and is equal to the height at which the consumption function intersects the vertical axis. The slope of the consumption function is determined by the value of the MPC. In this example the MPC is assumed to be a constant at 0.8. Hence for any given rise in income of £1, consumption expenditure will rise by 80 pence. As the MPC is constant, the consumption function is linear. Income-induced consumption can be calculated as the difference between total consumption and autonomous consumption ($C - a$) or as 0.8 times the value of the change in income. As

an illustration, distance b indicates induced consumption expenditure when income is Y .

As was stated earlier, consumption analysis is an essential feature of national income determination and it is in this context that income-induced consumption expenditure is of most significance. In the Keynesian theory of national income determination, an important prediction is that a change in expenditure, from whatever source, will cause a change in national income that is greater than, or a multiple of, the initial change in expenditure – referred to as the **multiplier principle**. The multiplier is defined as the ratio of the change in income to the change in expenditure that brought it about. The size of the multiplier is principally determined by the value of the MPC. The greater the value of the MPC, the greater the multiplier effect. Investment, exports and government expenditure are regarded as autonomous expenditure variables, i.e. they can change independently of the level of national income. Expansion in any one or other of these would raise consumption expenditure, income and output by an amount greater than the initial change. The additional consumption expenditure that arises as a result of the multiplier process is also referred to as income-induced consumption. A numerical example will serve to illustrate the importance of income-induced consumption expenditure.

If government expenditure on pensions is raised by £100m, the initial impact of this is that aggregate income is raised by £100m. However, the recipients of this additional income will spend a proportion of this, say 0.8, within the economy; hence consumption expenditure of this group will rise by £80m. This income-induced consumption is treated as extra income by the recipients, who in turn will spend a proportion of it, again for simplicity, we assume 0.8, inducing a further rise in consumption expenditure of £64m. A third group will receive the £64m as additional income and pass on, in the form of additional consumption expenditure, $0.8 \times £64m = £51.2m$ to a fourth group and so on until further induced expenditure is zero. The sum of these income-induced consumption expenditures plus the initial autonomous expenditure change give the overall multiplier effect on national income. In the example, the £100m injection will raise national income by five times that amount – £500m. Of this, £100m is the autonomous expenditure change (the rise in government expenditure) and £400m is the result of income-induced consumption expenditure. It can be seen, therefore, that induced consumption has a significant role to play in the determination of national income.

(b) Several variables influence **aggregate consumption**. As the previous discussion has indicated, in the basic Keynesian theory current consumption is a function of current income, and the level of consumption expenditure is determined by the level of autonomous consumption and the value of households' marginal propensity to consume. The higher the level of autonomous

consumption and national income and the greater the value of households' marginal propensity to consume, the higher will be the value of aggregate consumption. Aggregate consumption can be raised via the multiplier effect of a change in autonomous expenditure, the change in consumption dependent upon the value of the marginal propensity to consume. As a numerical example, if national income stands at £200 billion and consumption is £120 billion (and assuming that there is no autonomous consumption, hence the consumption function is $C = 0.6Y$), with $MPC = 0.6$, a rise in investment expenditure of £10 billion would raise national income to £225 billion, thereby raising consumption expenditure to £135 billion. This is obtained from the multiplier formula:

$$\Delta I \times \frac{1}{1 - MPC} = Y$$

where $\Delta I = 10$ and $MPC = 0.6$.

Besides current income, there are several other determinants of consumption. The distribution of aggregate income is an important influence on consumption. A change in the distribution of aggregate income causes changes in the aggregate level of consumption associated with any given level of income, given the assumption that the MPC will differ between different income groups. Low-income households will have higher MPCs and any redistribution of national income in their favour should raise the MPC for the whole economy, thus raising the aggregate consumption expenditure associated with any given level of aggregate income.

Consumption spending is influenced by the cost and availability of consumer credit, particularly on consumer durables like vehicles and electrical goods. Household expectations of the future also influence current consumption. Most notable amongst the factors likely to be taken into consideration by households will be job security/unemployment, the trend in the rate of inflation and future income prospects. Households may refrain from purchasing consumer durables if job security poses a threat to household income. Conversely, if households expect the rate of inflation to accelerate, they may be willing to purchase durables now to avoid expected price rises.

Taken together, such factors as changes in the distribution of income, the cost and availability of consumer credit and consumer expectations will cause the consumption function to shift and hence cause a change in the aggregate level of consumption associated with any given level of income.

Keynesian theory assumed that consumption was related to current income. There are, however, modified theories which relate consumption to some longer-term concept of lifetime income – generally referred to as permanent income. In the **Permanent Income**

Hypothesis (PIH) of Milton Friedman and the **Life Cycle Hypothesis** (LCH) of Modigliani, Ando and Brumberg, changes in a household's current income will affect actual present consumption only in so far as they affect permanent or life-time income. Transitory changes in current income, which will have only a small effect on permanent income, will be disregarded by households and hence will have only a small effect on actual consumption. The implication is that the short-term MPC, will be below the long-term MPC which is dependent upon permanent income. In the Keynesian theory the same change in consumption expenditure would result from any increase in income, irrespective of whether or not the household considered this to be a permanent increase. In the alternative theories, households would consider whether the income change was permanent or not. Thus, if income changes, the effect on consumption expenditure may be small in the short term, as households are uncertain as to whether the change is permanent, and consumption will respond more fully only if the income change does prove to be an increase in permanent income. One economic policy implication of this is that attempts to stimulate consumption by taxation changes on income may be discounted by households as not affecting their permanent income. Hence the lower short-term MPC value reduces the effect of the multiplier, with income-induced consumption being substantially below the policy-makers' expectations. Consequently policy-makers' influence over the level of consumption expenditure is weakened.

This is very impressive because it takes the essay out of the Keynesian theories of consumption and into the views of other economists. At A-level these would not be expected to be known in depth, but an outline idea of alternative theories of consumption could make all the difference in an essay of this kind.

An interesting new development which could be brought in concerns the impact of the National Lottery on consumption. If it is assumed that the Lottery is not real consumption because no goods or services are exchanged directly for money, it could be argued that it has distorted normal consumption patterns significantly.

General comments

Questions which test the understanding of consumer behaviour are common in exams. This could be at a microeconomic level with utility and indifference analysis or at a macroeconomic level as seen above. Questions on savings levels in the economy are possible too – the savings ratio is important in that it helps to determine the supply of loanable funds. How far do trends in consumption and saving influence economic growth in an economy?

Related question

- (a) What do you understand by the term 'savings ratio'? (5)
- (b) Why may a low savings ratio be of concern in an economy? (5)
- (c) What factors are likely to influence the savings ratio in an economy? (15)

Essay 3

'The depletion of the rain forests is an illustration of the fact that pursuing high economic growth will eventually impoverish everyone.'

'Economic growth is the only way to reduce poverty in less developed countries.'

Discuss these two statements.

(25)

Tackling the question

This is an unstructured, quite open-ended essay which invites discussion on two contradictory statements. In fact the two statements are called **normative** because they are essentially value judgements. There is no way that the statements can be completely proved or disproved; arguments can only be advanced either supporting them or opposing them. A good, **well-structured essay plan** will help to prevent you going off at a tangent. In an examination the time constraint means that essays like this need to be answered with discipline, otherwise they become over long and can descend into waffle.

Answer

It is important to recognise immediately the contradiction in these two statements. There is a major problem facing emerging nations. They often feel that the developed countries were guilty of massive exploitation of finite resources during the Industrial Revolution, and that they continue to be guilty of the most polluting activities. The newly industrialised countries face being admonished for wanting to develop just as the

The apparent contradiction implicit in the two statements exemplifies one of the most important dilemmas facing governments, agencies and charities concerned with the conservation of the world's resources and indeed with the future of the planet itself. This is to reconcile the aspirations of third world countries with the damaging effects of economic activities on the ecosystem.

A model of economic development advanced by W.W. Rostow suggests that once essential pre-conditions are fulfilled, a poor traditional society may 'take off' into self-sustained economic growth, leading to a mature stage of development characterised by basic secondary industry, and finally to an age of high mass consumption. Such a model is descriptive of the economic development of the developed countries of the world such as the UK, France, Germany,

the USA and Japan. The high material standards of living in these countries are very attractive to many leaders of third world countries, who see this pattern of development as a highway to affluence and national status.

Unfortunately, economic growth in these terms has its downside, not simply for the developing countries, but for the world as a whole. Such growth makes great demands on resources of energy and raw materials: a global pursuit of economic growth would bring about a rapid depletion of scarce, irreplaceable resources, the destruction of plant and animal life and an increase in pollution associated not only with industrial processes but with the waste products of a 'throw-away' society. A 3% growth rate implies a doubling of production and consumption every 25 years. Human life and economic activity are an interdependent part of the wider ecological processes that sustain life. We have been made aware of the destructive results of acid rain created by the burning of fossil fuels, the life-threatening effects of fluorocarbons on the ozone layer, the possibility of global warming as a result of the combustion of fossil fuels and the depletion of the rain forests. Industrialisation and urbanisation have created problems of air, water, noise and visual pollution.

Some of the world's fastest growing economies have been the developing countries of the Far East. These are the 'tiger' and 'tiger cub' economies of South-East Asia. They include Malaysia, Indonesia, the Philippines, Hong Kong, China, Thailand and Taiwan. During his 1994 tour of Australasia, the Prince of Wales in his address to the Business Leaders' Forum in Sydney spelled out the consequences of runaway growth. 'We ignore at our peril the simple fact that throughout Asia much of the land, water and air is being poisoned every day by unbridled development', he said. 'Many of the region's people lack such basic amenities as reliable drinking water and access to education.' Even leisure takes a costly toll in Asia as villages are demolished, trees felled and lakes drained to create golf courses for the wealthy. The World Bank researchers said recently that five of the seven cities with the world's worst air pollution are in Asia. Sarawak on the island of Borneo has one of Asia's last swathes of virgin forest. Environmentalists say loggers will have devastated it within 20 years.

Naturally, the political leaders of the countries of South-East Asia are hostile to such criticism, particularly from spokesmen of Western countries, whom they accuse of trying to hold back the development of Asia with green concerns.

It should be said, however, that developing countries do not have to follow the pattern of development of Western countries. Indeed, economic growth in these terms has been seen in a number of cases to fail miserably as a means of reducing poverty. L. Timberlake in his book *Africa in Crisis* states 'Africa is dying because in its ill-planned, ill-advised attempt to "modernise" itself, it has cut itself in pieces. It has resulted in the decline of traditional economic activi-

developed world has done since the middle of the nineteenth century. Should the less developed countries restrain their development to satisfy the consciences of the industrialised world?

In addition to Rostow's writings on the stages of economic growth, Mishan's book *The Costs of Economic Growth* discusses the problems associated with rising prosperity. 'Green economics' has become an important issue in the study of the subject.

ties, depopulation of rural areas and the destruction of the agricultural base and the development of huge cities surrounded by shanty towns with their destitute inhabitants.'

These consequences have often been the unintended results of foreign aid and investment. The theory is that a concentration of investment in a 'prestige project' such as a hydro-electric scheme and aluminium smelter would create a 'growth pole' from which newly created wealth would spread through the surrounding countryside and its population. This has been described as the 'swash' effect. In many cases the unplanned and unintended outcome has been to create two levels of wealth. What often happens is that the growth pole has more links with the developed countries and companies than with the local people. The result is dualism. As a result of the process, the wealthy core becomes richer while the poor periphery remains poor. This is labelled the 'backwash' effect. People migrate from rural communities to the cities to live in shanty towns, debilitating the agricultural base and increasing rural poverty.

Some important lessons have been learned from the failure of development schemes in the third world. If economic growth is interpreted as an increase in human welfare, different strategies of development can be devised which are more suitable to the traditions and culture of the population.

We can identify the following factors as contributing to welfare:

- (i) The production of goods and services;
- (ii) Scarce environmental goods such as space, energy, natural resources, plant and animal species;
- (iii) Time or leisure time;
- (iv) Equitable distribution of income;
- (v) Working conditions;
- (vi) Employment;
- (vii) Future prosperity, insofar as this depends on our use of scarce resources.

The economic problem concerns the satisfaction of wants in relation to scarce resources. The process involves choice and the sacrifice of alternatives. This sacrifice is termed 'opportunity cost'. If we examine the above list of factors, we will see that the production of goods and services is only one of the factors affecting welfare. The single-minded pursuit of production will be at the cost of environmental damage and resource depletion, and may lead to less leisure, poorer working conditions and higher unemployment. The trade-off between increased production and employment may not be obvious. In advanced industrial economies, increased cost efficiency has meant a decrease in the labour/output ratio and an increase in the capital/output ratio. Thus, unless growth is maintained, unemployment rises.

There is also an illusion that growth in output, as measured by GNP, necessarily means an increase in material welfare. Some of this

'output', however, consists of the ill-effects of growth, e.g. treatment of road accidents, ill-health through stress and pollution, and the cost of commuting over long distances. Strictly speaking these should be treated as costs and deducted from the value of output.

It is often argued that economic growth will relieve poverty, but there are wider issues to consider when looking at this issue.

If economic development is carried out in a way which tries to maximise human welfare in the widest sense, then it can reduce poverty without being utterly inimical to the planet and ultimately to its population. Because of the dangers of 'dualism', many third world governments are trying to spread their economic growth throughout the country by the encouragement of cottage industries, craft centres, comprehensive communal schemes, local agricultural advisory centres, rural medical centres and local training schemes. The technology employed is chosen to ensure that it is appropriate, avoiding the use of oil and depending on easily made and cheaply maintained machines.

It is important to remember that economic growth and economic development are not the same thing.

In conclusion, it can be said that if economic growth is pursued in such a way that natural resources are conserved rather than ruthlessly exploited, and if the objective is maximisation of welfare, in its widest sense, rather than simply production, then the developing countries should be able to look forward to improving living standards without 'impoverishing us all'.

This is a difficult essay to handle and a good knowledge of development issues is important if it is to be answered successfully. The key issue is whether societies can improve welfare over the coming years. Economic growth measured by a rise in real GDP per head is only part of the answer.

General comments

This essay deals essentially with the costs of economic growth. However, it also takes in the issue of economic development in less developed economies and newly industrialised economies. It illustrates the **interdependence** of many topics in the macroeconomics syllabus. It is difficult to learn macroeconomics in little compartments because so many topics overlap; for example, economic growth and trade are strongly related.

Related question

- (a) What are the main objectives of the World Trade Organisation (WTO)? (8)
- (b) Discuss the view that the WTO has done more for the developed world than it has for less developed countries in recent years. (17)

Essay 4

- (a) Explain the differences between saving and investment. (10)
- (b) What factors determine the level of investment? (15)

Tackling the question

Part (a) simply requires a recall of knowledge. The fact is that savings and investment are two different things, although they are easily confused. In view of the fact that 10 marks are available, a fairly comprehensive answer is needed, not just basic definitions. In part (b) a combination of theory (e.g. MEC) and real world analysis is required. Key factors such as expectations, the rate of interest and technological change need to be brought into the answer.

Answer

(a) In everyday usage, the terms **savings** and **investment** are often used synonymously. However, in a modern economy they do not necessarily amount to the same thing and it is important to distinguish clearly between them.

Saving is abstaining from present consumption in order to provide for greater future consumption, and is, therefore, the difference between net disposable income and consumption expenditure. Net investment, or capital formation, is the net increase in real capital, such as equipment, buildings or stocks.

In a simple economy, it may be the case that saving and investment amount to the same thing. For example, in a simple farming economy, if a farmer spends a day installing a drainage system in a field instead of harvesting the crop, he is saving because he is abstaining from present consumption in order to increase consumption in the future, the amount of saving being the difference between his net real income and his consumption. In this case, however, he is also investing, i.e. the farmer has undertaken net capital formation which will increase the future productivity of the farm – he will have an additional field to use next year. The farmer abstained from present consumption (savings) because he wished to install drainage in a field (investment). However, if such an investment opportunity

had not presented itself, it would not have occurred to the farmer to save and, indeed, the means would not exist.

In a modern economy, however, there is a sharp distinction between saving and investment because they are generally carried out by two distinctly separate groups. The act of saving is generally carried out by individuals and households, for a variety of reasons: to buy an expensive item in the future, to provide income after retirement, for precautionary purposes, to leave a legacy to children, or merely for its own sake. Investment, on the other hand, is carried out by firms wishing to increase their productive capacity in some way, and the motives for this investment are entirely different from the motives for saving.

In a modern economy, most saving is carried out with the aid of financial institutions such as banks and insurance companies; these savings provide a pool of funds which firms can borrow and use for investment purposes. There is, however, no reason why the amount being saved at any time should match the amount which firms are wishing to invest.

In the economic sense, investment does not include the purchase of a piece of land, a deed to property or a second-hand security such as an old share. Such items are transfer items: what is bought is what already exists; net investment occurs only when there is the creation of additional real capital.

Corporate savings occur when firms retain part of their profits rather than paying them all out in dividends. Corporate savings are usually for a specific purpose and this part of total savings will generally be allocated to investment. Total private savings consists of corporate and personal savings, whilst personal savings are the aggregate of household and individual saving.

(b) Most of the increase in a nation's productive capacity will result from improvements in the quality of, and an increase in the quantity of, the capital resources available. At any one time, there is a stock of capital in an economy (machines, equipment and stocks) which has been built up over the years by investment, society having decided to forgo some current consumption in order to release the resources which can then be used for the production of producer (or capital) goods. The use of resources in order to produce capital goods is referred to as investment. The most common form of investment is the acquisition of machinery and equipment by private firms, but the public sector is also responsible for a large proportion of investment in the UK. Much investment consists of merely replacing machinery worn out during the act of production (i.e. depreciation). The term 'gross investment' is used to refer to the total of all investment in a firm, or an economy. Net investment refers to additional

This paragraph is at the core of the answer! The supply of loanable funds comes from savings, while the demand for loanable funds comes from those who wish to borrow money, possibly to buy machinery as investment.

Good background. It is important to remember that public sector investment is social capital in the form of roads, schools and hospitals.

investment, over and above that required for replacement and, as such, represents an addition to productive potential. Note that there can be gross investment without net investment. In order to consider the determinants of investment, we have to analyse those factors at the level of the firm and those which affect aggregate investment.

Private firms exist in order to make profit and one of the most important factors determining the level of investment is the entrepreneur's view of the future prospects for profitability, which is normally a reflection of the expected level of sales. If the level of demand (and, therefore, sales) is expected to be high in the future, then the entrepreneur will want to expand capacity in order to meet these sales expectations. His or her view will also be influenced by many other changes taking place in the firm's environment. In particular, at the present time, the rapid technological changes taking place may make re-investment in new plant and equipment vital in order to keep pace with rivals. Firms may also wish to invest in order to diversify into a wider product range, or in order to improve the quality of the existing product range. All of these motives really amount to profit-maximising behaviour, or at least behaviour to ensure survival.

Investment behaviour is therefore strongly influenced by the firm's view of the future course of events, which, in turn, is a reflection of changes in the economy as a whole. Firms will only invest when they think they can sell their products, and their attitudes will be largely influenced by factors such as the prospects for the growth of demand in the economy, general economic policy and international competition. An example of how government policy can affect private investment is the financial constraint imposed upon National Health Service expenditure and the effect of this on the drug companies, which will be forced to reconsider plans for expansion.

Investment is also influenced by the cost and availability of finance. The cost of finance is the rate of interest, and firms will only invest if they consider that the return (yield) from the investment is going to be greater than the interest paid on the capital invested. Where firms are using retained earnings as a source of finance, they will be concerned with the general level of liquidity in the economy. Also relevant here is current tax policy regarding corporate profit and investment allowances. For example, the 'Classical System' of corporation tax (which was in operation between 1965 and 1973) charged a lower rate on retained profits than disposals in the hope that investment would be encouraged, although the effectiveness of this measure is open to question. Depreciation allowances increase profitability by making depreciation a tax deductible expense, and measures such as accelerated depreciation make investment more attractive by allowing the early 'write-off' of assets.

In order to determine whether to invest in a machine, the firm will want to consider the rate of return on capital, which involves two concepts, the **marginal efficiency of capital** (MEC) and **net present value**. A profit-maximising firm would hire any factor input up to the point at which its marginal revenue product was equal to its price. In the case of a capital good, there will be a 'stream' of income generated over its lifetime and it will be necessary to estimate what these future returns will be (as well as the variable costs). It is then possible to use the 'present value discounting method' in order to decide whether the investment is worthwhile. The present value (PV) method consists of discounting the future stream of net returns (income minus costs per year) and comparing the total of these with the cost of buying the machine (C). If PV exceeds or is equal to C, then the project should go ahead. It is important to discount future sums because any yield obtained in the future is not worth the same as that yield if it were received today. The discount factor used is the rate of interest which (in theory) is synonymous with the opportunity cost of capital and is r in the formula for PV, given as:

$$PV = \sum_{i=1}^n \frac{Y}{(1+r)^i}$$

where Y is the expected net return and n is the number of years over which the project is discounted.

An alternative approach is the **internal rate of return** (IRR) method of discounting. This is written as:

$$PV = \sum_{i=1}^n \frac{Y}{(1+x)^i}$$

The IRR estimates that discount factor x which produces $PV = C$ (where C = initial capital costs). Keynes referred to the IRR as the marginal efficiency of capital (MEC). The firm will invest in a machine if x exceeds the marginal cost of borrowing funds, which in a perfect market would be the rate of interest (r). Accordingly, the firm will invest in a machine if x exceeds or is equal to r . If we assume diminishing marginal productivity, i.e. that as the amount of capital is increased the MEC declines, then the demand curve for capital will be inversely related to the rate of interest. A profit-maximising firm will, therefore, be in equilibrium with respect to its capital stock when its MEC is equal to the rate of interest. Whenever the MEC exceeds the rate of interest, it will pay the firm to obtain a further unit of capital.

The MEC curve, or demand for capital curve, can also be derived for the quantity of capital in the economy as a whole. The MEC schedule is, therefore, the economy's demand schedule for capital with respect to the rate of interest. In Figure 1, at the high rate of interest R_1 only the investments with the highest rates of return will be undertaken. The demand for capital for lower-yield investments

Bring in some theory, although this theory is quite difficult. To avoid the maths just explain this in words. It is not necessary, although very impressive, to be able to show how future incomes can be discounted to present day values.

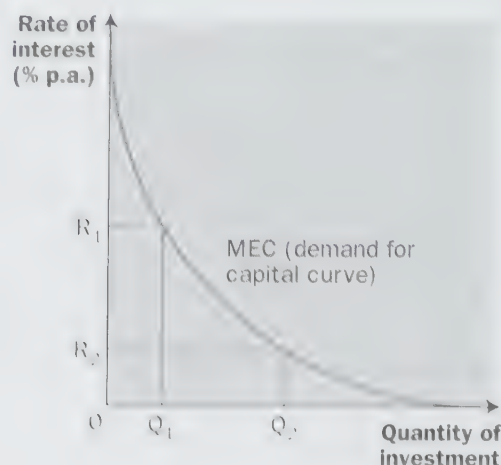


Figure 1

will increase only as the rate of interest falls. At R_2 the quantity demanded has increased to Q_2 . At the same time, however, it is probable that other changes will be taking place in the economy (such as technological changes) and the MEC curve is likely to shift. Improved technology raises the MEC to the right, whilst static technology lowers it to the left.

Investment in the public sector is by the government, local authorities and the nationalised industries. It is inevitable that, to some extent, public sector investment will be a reflection of prevailing political attitudes; it is also the case that profitability will not be the only criterion for the vast majority of investment decisions. Investment for the provision of social services (such as education or health), or in services more akin to commercial activities (such as transport), can be referred to as social investment. In making social investment decisions, it is necessary to incorporate into the decision-making process social costs and benefits in addition to private costs and benefits, in a discounted investment process referred to as **cost-benefit analysis**. Where the sum of discounted private and social benefits outweighs private and social costs, investment projects in the public sector should go ahead. In recent years public sector investment has used private sector finance via the private finance initiative.

In conclusion, the total amount of public sector investment will inevitably reflect the amount which the government makes available to the public sector, which will tend to reflect a political view of the amount of investment that the state should be responsible for. The level of investment tends to reflect factors present in the economy and, for that reason, the level of private sector investment in particular is highly volatile and can itself bring about further changes in income and employment.

Don't forget public sector investment. Also remember that because of limited public funds the private sector is being encouraged to invest in public sector finance via the private finance initiative (PFI). To date this has mainly been used in road building.

General comments

Investment is an injection into the circular flow of income and thus when it takes place there is a multiplier effect in the economy. The level of investment is an important determinant of future rates of economic growth. Economies which have high levels of investment and saving as a % of GDP are often high-growth economies. The UK's low growth compared to other developed countries has been explained in part by low levels of investment in the economy.

Related question

- (a) What is the accelerator theory of investment? (5)
- (b) What are the benefits to an economy of a high level of investment? (20)

Essay 5

- (a) Why are there several definitions of the money supply in the UK? (10)
- (b) What issues arise for the monetary authorities in controlling the supply of money? (15)

Tackling the question

Questions on money are not popular with students mainly because it is an area of the syllabus which they find quite difficult. Certainly this question would be avoided by many candidates if they had a choice of several others. In part (a) you will need sound knowledge of money supply measures – certainly M0 and M4, which the government pays closest attention to these days. Basically the different measures of money supply give the government and the Bank of England different information and messages about what is happening in the economy. In part (b) issues of inflation, interest rates and the exchange rate arise out of the control of the money supply.

Answer

What is narrow and broad money? For the purposes of the examination you will really need to know M0 as the best definition of narrow money and M4 as the best definition of broad money.

(a) It is believed that the supply of money influences the level of expenditure and as a consequence the real economy. If this is so, then the control of the money supply offers a means of managing the economy. If the supply of money is to be controlled, then its rate of growth must be measured. This is not a simple matter since there is not an acceptable single definition of the money supply.

Money performs two very important functions: a medium of exchange and a store of value. The stock of money which is held to carry out transactions comprises notes and coin and bankers' operational balances with the Bank of England. This defines the monetary base or M0. To this stock may be added private sector sight deposits, which include non-interest and interest-bearing deposits and also interest-bearing retail sterling bank deposits. These stocks of money, defined as M2, which are held to carry out transactions, represent 'narrow' measures of the money supply.

Money is also held as a store of value. Time deposits in banks, building society share and deposit accounts and certificates of deposit

all fulfil this function. The intention is to hold these balances as a stock of wealth on which interest is earned. However, the potential liquidity of these balances cannot be ignored since they can easily be converted into transactions balances. The monetary authorities therefore deem it important to monitor a broad measure of money known as M4. This includes notes and coin, plus residents' sterling deposits, both sight and time, with banks and building societies.

Bank, Treasury and local authority bills are classified as 'near' money. They have a high degree of liquidity and can be quickly converted into money without significant loss. Such assets, added to M4 stocks, are termed M5.

It is important for the authorities to monitor all these measures of money to learn about the growth of total spending power in the economy. M0 or high-powered money has a special significance because it is the one measure over which the Bank of England has significant control.

(b) Chancellor Lawson, addressing the Bow Group in August 1980, stated that monetarism embraced two basic propositions, that:

- (i) changes in the quantity of money determine, at the end of the day, changes in the price level;
- (ii) government is able to determine the quantity of money.

These propositions raise important issues. The first proposition accepts the monetarist doctrine of direction of causality between variations of the money stock and prices. It asserts that increases in the money supply result in increases in prices. Keynesians, however, believe that the causal effect runs the other way, i.e. that increases in prices increase the demand for money, which is then met by the monetary authorities.

Economists disagree about the effects of changes in the money supply. The Keynesian and monetarist transmission mechanisms are useful when analysing these effects.

Monetarists believe that people have a stable demand for the real value of money. If the money supply is increased, people will find themselves with balances in excess of their demand. They will respond by spending the excess on a range of real and financial assets in order to readjust the ratio between their money balances and their income. Since monetarists believe that at any given time, unemployment is structural rather than a result of deficiency of demand, the extra spending induced by the increased money supply will force up prices.

Keynesians, on the other hand, believe that the demand for money is unstable. They argue that an increase in the money supply will result in lower interest rates, which in turn will increase the demand for speculative balances. These are idle balances and since they are not spent, the velocity of circulation will fall. Thus, they

argue, the increased money supply will not have a direct effect on output or prices. They do accept that there are indirect income effects through increased investment encouraged by lower interest rates.

These differences of belief between the monetarists and the Keynesians explain the low priority given to monetary policy by the Keynesians and the primacy it is accorded by the monetarists.

The second proposition makes it necessary for the monetary authorities to adopt an appropriate measure of money which will serve as an indicator of monetary conditions and which can be controlled by the authorities. When monetary targets were introduced in 1976, an aggregate known as £M3 was accepted as a broad measure of the money supply. This comprised notes and coin and sight and time deposits with the commercial banks. Factors which influenced the size of £M3 were bank lending, the PSBR and external flows of money. These were elements which the monetary authorities believed they could control, which made this aggregate eminently suitable.

Unfortunately the need to control the money supply conflicted with the free market philosophy of the government. The precise control of £M3 was made difficult, if not impossible, by financial deregulation. The abandonment of direct controls in 1980 led to a great increase in bank lending. The shift of banks into mortgage lending and building societies into money transmission with the issue of cheque books led to problems of controlling lending and defining the money supply. The increasing use of credit cards also made the accurate control of £M3 difficult. Added to these problems was the size and growth of the PSBR, which was increasingly outside the control of the government but was dictated by the increase in unemployment and the need to provide unemployment benefit and social security. The deep recession of 1981–2 also led to distress borrowing by businesses suffering from cash-flow problems.

The problem of deciding what monetary aggregates should be controlled was compounded by the problem of selecting an effective means of actually controlling them. Direct control of bank lending had been practised in the 1960s and 1970s but had proved to be a failure. Banks and bank customers devised means of evading Bank of England controls, a process called disintermediation.

We have already defined monetary base as notes and coin in circulation and banks' operational deposits at the Bank of England. The central bank is in a position to control the reserve assets of banks through open market operations and by this means to force the banks, if necessary, to reduce their lending. Such control was actively considered by the monetary authorities in 1980 and was much favoured by the monetarists, who saw it as a means of directly controlling the money supply. It was rejected on the grounds that it would encourage disintermediation and create extremely volatile interest rates. This would be bad for business, bad for mortgages, unsettling in the foreign exchange markets and bad for trade, and

would create difficulties for the Bank of England whose task it is to fund the borrowing requirement.

The monetary authorities therefore make use of interest rates to limit the demand for loans and thus attempt to control the stock of money. Control is by no means perfect since it is impossible for the Bank of England to predict the effect of a set of interest rates on demand. Much depends on the state of the economy and the long-term investment plans of large companies. There are also considerable time lags involved before changes in interest rates take effect.

The conduct of monetary policy by means of interest rate control must also take account of the impact on exchange rates. Floating exchange rates are affected by changes of interest rates intended to control the money supply. Thus a tight monetary policy and high interest rates would encourage capital inflows and an appreciation of the exchange rate. This would have the effect of discouraging exports and encouraging imports. This was one factor explaining the depth of recession and de-industrialisation of the early 1980s. If exchange rates are fixed, the monetary authorities have little scope in independently deciding on the level of interest rates. They must impose rates which will guarantee stability to the rates of exchange.

The Medium Term Financial Strategy was introduced by the Conservative government in 1980 with two principal aims. These were the setting of medium-term money supply targets and the reduction of the PSBR. It was hoped that setting money supply targets would influence the inflationary expectations of businesses, the unions and the general public. The PSBR is a fiscal outcome but it can have serious implications for the money supply if the government has to borrow from the banking sector. The MTFS did not prove to be a resounding success. Targets for £M3 were frequently exceeded and it was very difficult to control government spending and the PSBR in times of recession.

Finally, an important issue for the monetary authorities in confronting the problem of monetary control is whether the Bank of England should be independent. Countries such as Germany and New Zealand which have independent central banks have been notably successful in controlling inflation. Their independence prevents a government from engineering a boom for electoral purposes. This is an issue which is currently being hotly debated.

What is the importance of interest rates? Changes in interest rates have an enormous impact on the UK economy. Consider the effect of a rise in interest rates on mortgages, bank lending and the exchange rate.

The Bank of England is now 'operationally independent', which means that it is free to operate monetary policy to meet the targets laid down by the government. The Monetary Policy Committee of the Bank of England is responsible for the administration of monetary policy.

General comments

The ability to distinguish narrow and broad money is important, as is the ability to distinguish between the functions of money and its desirable characteristics. Can you explain how the commercial banks create credit and how the Bank of England can control credit creation? Detailed knowledge of the workings of the money markets is no longer required by most syllabuses; nor is theoretical knowledge of interest rate determination. The issue of central bank independence is very topical and worth knowing well.

Related question

- (a) What are the functions of money? (8)
- (b) How does high inflation make it more difficult for money to fulfil its functions? (17)

- (a) What is the public sector borrowing requirement (PSBR)? (5)
- (b) Should economists be concerned about the size of the PSBR? (20)

Tackling the question

Part (a) requires an **accurate definition**. It does not need to be too long with only 5 marks available, but marks will be lost if there are signs of vagueness in the answer. Part (b) is a chance to **discuss** the controversial issue of whether the size of the PSBR is of any concern. Basically the **Keynesian** view is that it is not, while **monetarists** believe it is. However, most economists believe that large deficits are a problem and your answer should really reflect that balance.

Answer

(a) The **public sector borrowing requirement** (PSBR) is the annual total borrowing of the public sector. This includes the central government, local authorities and the nationalised industries. It is sometimes loosely, but a little inaccurately called the **budget deficit**. The borrowing by the public sector is met by the sale of government securities (gilts), Treasury bills and national savings. The 'golden rule' of public finance is that any borrowing by the public sector should only be for spending on capital projects such as new schools, hospitals and roads.

(b) **Keynesians** regard a budget deficit as a means of stimulating aggregate demand and thus increasing output and employment in the economy via the national income multiplier. They either ignore or play down the monetary effects of a PSBR.

Monetarists place great emphasis on the indirect monetary effects of the PSBR and dispute the direct fiscal stimulus to output and employment of a budget deficit. They see the monetary effect as:

- (i) The **crowding out** of private sector investment as a result of increased interest rates caused by the growth of the PSBR. In

Guidance notes

Don't write any more for 5 marks! Remember that the budget deficit is often used to refer to the borrowing of the central government only.

Deal with this first! The different 'schools' of thought have opposing views on the issue of the PSBR. The Keynesian and monetarist 'transmission mechanisms' demonstrate this issue very well.

Now deal with the concerns! These concerns are now accepted by many economists and no government would allow the deficit to grow out of control.

order to fund the PSBR (i.e. to borrow outside of the banking system), it is necessary for the Treasury to offer attractive rates of interest. The theory of 'financial crowding out' helps to explain why monetarists believe that fiscal policy is ineffective in stimulating output and employment.

- (ii) If the PSBR is fully funded, then its impact on the money supply will be neutral. If, however the government resorts to borrowing from the banking system (either the Bank of England or the commercial banks), the liabilities of the commercial banks will increase and therefore the money supply will increase too. The impact of such borrowing will be magnified by the money multiplier.

The monetarist theory of inflation is based on the **quantity theory of money**: $MV = PQ$, where M = the stock of money, V = the income velocity of circulation, Q is the physical output of goods and services and P is the average of their prices. Monetarists argue that the income velocity of circulation and the physical output of goods and services are stable and therefore an increase in the stock of money will be reflected in an increase in the level of inflation.

Monetarists see the ultimate objective of policy as the creation of conditions in which market forces and private enterprise can ensure full employment and economic growth. Control of inflation is seen as a necessary condition or intermediate objective which must be achieved before market forces can work properly.

The magnitude of the PSBR varies counter-cyclically, i.e. it increases during a recession and falls during a boom. During a recession, unemployment benefits and social security payments escalate, whilst tax revenues are reduced through company unprofitability, bankruptcies and unemployment. Since the government is committed to paying benefits, during a recession its ability to control the size of the PSBR is limited. These benefits help to buoy up demand and to soften the severity of a recession. Since their payment does not depend on government discretion they are termed **automatic stabilisers**.

If the PSBR is very large then it may not be possible to fully fund the debt. Since the mid-1980s, the government followed a deliberate policy of fully funding the PSBR as part of its monetary policy. However, during the deep recession of the early 1990s the PSBR increased to £50bn. In the March 1993 budget the chancellor announced a relaxation of the fully-funded rule to allow the sale of debt to the banking system. This would have the effect of increasing the money supply.

The PSBR is the flow of new borrowing necessary to finance a public sector deficit. The **National Debt** is the stock of all historically accumulated borrowing which the central government has not yet paid back.

In 1993, when the PSBR was so large, Chancellor Norman Lamont warned about the danger of a structural deficit. Borrowing increases the interest payments which must be met by the government. Unless the PSBR could be reduced in the medium term, the danger was that the National Debt would increase year by year with an increasing burden of interest payments to be met by the taxpayer.

The Maastricht Treaty laid down as a condition of monetary union that all the EU countries should achieve convergence of their borrowing requirements and their national debts as a proportion of their GDP. Thus, the PSBR should not exceed 3% of GDP and the National Debt should not exceed 60% of GDP. These conditions have imposed severe strains on the economies of Germany and France, which are obliged to cut back on expenditure at a time when unemployment rates are high and rising.

Don't forget the EMU implications. The Maastricht convergence criteria are seen by some economists as rather tough and too deflationary. Some countries may only meet the 3% budget deficit criteria by privatising state-owned assets.

General comments

The PSBR is a very important part of the conditions for EMU membership. If all potential EMU participants have a similar PSBR as a percentage of GDP then an important step in the convergence of EU economies will have been achieved. Most governments are very wary of increasing the size of their PSBR mainly because of the crowding out issue. Using large deficits to reflate demand is now a thing of the past, especially when one considers the inability of governments to act independently in a world economy which is so open and interdependent. The power of international speculators makes Keynesian demand management impractical for a single country acting alone.

Related question

- (a) Distinguish between fiscal policy and monetary policy. (8)
- (b) Why do economists disagree about the use of fiscal and monetary policy to solve problems such as inflation and unemployment? (17)

Essay 7

- (a) Explain three criteria that you would expect a 'good' tax to meet. (6)
- (b) How far do the following taxes meet these criteria:
- (i) direct taxes; (9)
 - (ii) indirect taxes? (10)

Tackling the question

Explain the three criteria you have chosen clearly and concisely. You need to be able to **apply these criteria to part (b)** – so make sure that you can! Part (b) is much more difficult and asks you to look at taxes like **income tax**, which is direct, and **VAT**, which is indirect, to see the extent to which they meet the criteria explained in (a). There is probably no definitive answer and normative issues may arise here. Good argument will be well rewarded.

Answer

Clearly distinguish the three criteria! Remember that there are five canons of taxation laid down by Adam Smith. These are the essentials for a good tax.

(a) Taxes should satisfy three criteria: equity; simplicity; economic efficiency.

Equity: A tax is equitable if those with high incomes pay a larger proportion in tax than those on low incomes. This principle is broadly accepted by governments, and progressive income tax in principle can be described as equitable. However, the ability to pay can also be measured by a person's consumption.

Simplicity: A simple tax is one that is cheap for the tax office to collect, easy for the taxpayer to understand and comply with, and difficult to dodge.

Economic efficiency: Taxes should not make individuals and companies do things which they would not do if those taxes did not exist, thus diminishing economic welfare.

(b) (i) Britain's two biggest taxes are income tax and National Insurance contributions (NICs). Both are examples of direct taxes and can be criticised for lacking simplicity and equity.

Income is hard to measure. Although cash payments like wages and salaries are straightforward, even wage or salary earners get some of their income in other forms, such as fringe benefits. The difficulties are greater for the tax office when people obtain all or part of their income from business activities. People go into business hoping that the value of their assets will appreciate, but what part of this appreciation should be treated as income? Furthermore, the size of the 'black economy' gives some indication of the difficulty of tracing many sources of earned income.

Income tax and NICs are inequitable because low-paid workers in the 'poverty trap' may gain nothing, or may even lose, from an increase in earnings when these cause benefits to be lost and tax to be paid. The families in these traps are enmeshed in a web of overlapping tax schedules and benefit thresholds, developed and administered by two separate departments – the Department of Social Security and the Treasury – with differing objectives in mind. Thus, as low incomes rise, people in the trap qualify for income tax and National Insurance contributions and lose benefits such as housing benefit, family income supplement and free meals.

To the extent that they discourage people from earning more or indeed seeking employment, income tax and NICs can also be criticised on the grounds of economic inefficiency. Income tax often attracts criticism in terms of economic inefficiency because of its alleged disincentive effects. A progressive system of personal taxation with successively higher marginal rates of tax is often considered as a deterrent to work and effort. This is controversial, depending on the relative importance of the **income effect** of the tax or the **substitution effect**. As higher marginal rates are applied, people may work harder to make up for lost income. This is the income effect. Steeply progressive marginal rates mean that by not working, the taxpayer sacrifices less and less income and enjoys more relaxation and leisure, i.e. the opportunity cost of leisure becomes less. This is the substitution effect. The key to which effect is stronger is probably the individual's target level of retained income. At some point, however, high taxation becomes demoralising. People emigrate, fiddle their taxes or decide that extra work is simply not worth the effort.

There is a widely held view that income tax has the effect of discouraging both the geographical and occupational mobility of labour. The net increase in pay may not adequately compensate for the shift of location or job.

It is argued that high marginal rates of income tax reduce the net effect of pay differentials and act as a disincentive to training for skilled jobs. But there is an income effect argument which states that if a person seeks a particular net income, he or she may be encouraged to look for a better paid job, if income tax is increased. There is no conclusive evidence that income tax is a deterrent to mobility.

Do you know the income and substitution effects? These two effects have given rise to the backward-sloping supply curve for labour.

Those people in the poverty trap have marginal tax rates of over 100% because if they earn more money, the increased income tax they have to pay plus their loss of benefits mean that they are actually worse off.

It is argued that income tax encourages people to consume rather than save since the after-tax return to the saver acts as a disincentive. Its effects on saving can be criticised on other grounds. Tax concessions on mortgages and pension funds have meant that savings have been directed to these ends rather than to economically more productive ends.

Taxes on profits will reduce the ability to invest. A tax on corporate income will tend to reduce a firm's ability to save and therefore to invest.

(b) (ii) Indirect taxes are taxes on spending and have the advantage of much greater simplicity than direct taxes. Tax accounts are kept by businesses and tax avoidance is much more difficult. Indirect taxes can be changed quickly and are thus more flexible than direct taxes. In the latter case, changes in tax thresholds and marginal rates of tax take a long time and considerable effort to administer. One disadvantage stressed by critics of indirect taxation is its inequitable, regressive nature. Goods and services are purchased by rich and poor alike and certainly the rich can afford to pay the tax more than the poor. However, many goods which form an important part of the budget of poorer sections of the community do not bear VAT and thus regressiveness is reduced.

It is often argued that indirect taxes do not suffer the disincentive effect of direct taxes since they are taxes on expenditure rather than income. The argument is false. Anyone considering whether to work longer or assume more responsibility weighs the obvious costs against the benefits of increased consumption. An increase in indirect tax would result in an increase in the price of goods. Indirect taxes, however, are included in the final price and after a while the consumer is less likely to be aware of paying the tax. Thus the announcement effect of these taxes is less pronounced than in the case of direct taxes. The amount of income tax paid appears regularly on the pay slip.

Indirect taxes can be criticised on the grounds of economic efficiency. It is sometimes suggested that indirect taxes are 'escapable' whilst direct taxes are not. It is true that any particular indirect tax can be avoided by a particular individual, but taxes in general cannot be avoided by individuals. Thus an 'escapable' tax leaves the person who escapes it worse off, since he or she would have preferred in happier circumstances to have consumed the good which is taxed, and makes everyone else worse off too, since it requires a higher rate of tax on those who consume the good.

The effect of indirect taxes is to raise prices and reduce output, but in terms of real income, their effect is not very different from direct taxes which reduce the level of disposable income and also reduce demand. Selective indirect taxes will affect economic efficiency by distorting demand, but a general ad valorem tax will avoid this result.

What is a regressive tax?
If a tax takes a smaller proportion of a person's income as income rises, it is said to be regressive. The Community Charge (Poll Tax) was a good example of a regressive tax.

General comments

Shifting the tax burden away from direct taxes to indirect taxes was a major part of the Conservative government's fiscal policy. Why was this so? Does a reduction in income tax rates benefit the economy? How far is the Laffer curve an accurate analysis of how tax revenue responds to changes in tax rates? Should governments be using direct taxes to redistribute income? What alternatives to taxation should governments be considering to finance the public spending programme? Has the private finance initiative (PFI) got a future?

Related question

- (a) Why do governments impose taxes? (10)
- (b) What are the advantages and disadvantages of using private finance in the provision of public sector services? (15)

Essay 8

What are the economic effects of inflation on a country?

(25)

Tackling the question

It is important to remember that the effects of inflation are not all bad, despite the desirability of consistently low levels of inflation. Most governments are keen to set inflation targets and to let their central banks operate the necessary monetary policies to bring them about. Once inflation has been defined in this question, several effects can then be dealt with. Be careful not to over-elaborate on any single point – try to cover as many effects as possible.

Answer

Let's start with some definitions.

Inflation is usually defined as a continuous rise in the price level. It is measured in the UK by the Retail Price Index (RPI). There is the 'underlying' rate of inflation and the 'headline rate'. The prices of goods and services depend on two factors: namely, the quantity of goods available and the amount of purchasing power in the hands of consumers. When the volume of purchasing power increases at a faster rate than the output of goods and services, prices will rise. The period of inflation will continue as long as the factors that are causing a continuous tendency for prices to rise operate. It can be said, therefore, that a period of inflation occurs when too much money is chasing too few goods. It is important to remember that inflation can be falling in an economy and prices still rising because prices can be increasing at a decreasing rate, e.g. 10% this year compared to 25% last year.

Now we can move on to 'the effects' – good effects and bad effects.

Rising prices stimulate the production of goods and services. A decision to produce is taken in anticipation of demand and if the selling price of the goods proves to be higher than expected, then profit margins will be greater than expected. This will cause producers to increase output to its maximum in the short run and encourage long-term investment. Rising prices and increasing profits

encourage a high level of production, and full employment is much easier to maintain.

The incomes of people take three main forms: namely, wages or salaries, dividends from profits and fixed incomes. The incomes of these different groups are not equally affected by a period of rising prices. When prices are rising, profits are generally higher than was anticipated and those who receive income in the form of dividends tend to gain. Wages and salaries do not usually rise as fast as prices and profits due to the time necessary for trade unions to negotiate wage increases with employers. During a period of inflation employers are generally willing to grant wage increases in order to maintain production, but increases in earnings generally lag behind the price rises and real wages may be lower than before. Wage and salary earners may, therefore, lose during a period of inflation.

People with fixed incomes include those living on pensions, debenture holders and landlords who receive ground rent from leasehold property. This section of the community becomes progressively worse off as prices rise. Those living on state pensions may be given increases from time to time to offset the cost of living, but all those who live on fixed incomes suffer a decline in real income during a period of rising prices.

There is a misplaced belief that everyone's income rises with inflation. While many people's incomes are index-linked, this is not true for everyone.

Inflation in the economy can have serious effects on the country's balance of payments. Rising prices result in goods becoming relatively dearer in foreign markets so that exports may decline. On the other hand, goods from abroad become relatively cheaper than home-produced goods and more are imported. Furthermore, the increase in purchasing power at home creates conditions in which producers can sell more goods on the home market and the incentives to export diminish. More money to spend also means that imports tend to increase. Thus a period of inflation encourages imports at the expense of exports and creates an unfavourable balance of payments.

Inflation poses problems of competitiveness for an economy if its inflation rate is above that of its trading partners. A devaluation of the exchange rate provides a 'quick fix' for this problem but doesn't solve it.

Finally, all debtors gain and all creditors lose during a period of rising prices. For example, if a man undertakes to repay £10 per week for 25 years to a building society, then, if prices and incomes rise, the real value of the £10 will decline. As a debtor and the owner of a house appreciating in value, he will gain; the building society, as the lender, will lose. The burden of the National Debt is also decreased because a smaller proportion of the national income has to be raised by taxation in order to pay the interest charges to lenders. This happens because as incomes increase so do the proceeds from taxation, whereas the interest charges on the National Debt remain the same.

The National Debt is the total outstanding debt of the UK government. At present it stands at about £400 billion. A high level of inflation will reduce its value as a % of gross domestic product.

The current view of many economists is that a little inflation is good because it allows markets to adjust better to changes in demand. In any case, the RPI probably overstates the inflation rate.

Unchecked inflation can get out of hand. Rising prices cause rising wage demands; if these demands are met, spending power and manufacturing costs both increase, leading to yet higher prices and so to another twist of the inflationary spiral. If wage rises are disproportionately large, this process is self-accelerating and can severely disrupt all sectors of the economy. In recent years governments have set inflation targets such as 1–4% per year, or more recently 2.5%. The Bank of England now has operational independence and is free to operate monetary policy, such as interest rate levels, in order to meet this target. A *little* inflation is now seen as no bad thing – indeed some economists believe zero inflation has several disadvantages in an economy.

General comments

In recent years most developed economies have been through periods of quite low inflation. It is important to remember that the competitiveness of an economy depends in part on having a rate of inflation comparable with or better than its trading partners. In the UK's case this means the EU, and with EMU fast approaching, inflation has to compare favourably with member states in order to meet the Maastricht convergence criteria. To meet the criteria, the UK must have an inflation rate within 1.5% of the average rate in the three lowest inflation countries in the EU.

Related question

- (a) How is the UK inflation rate measured? (15)
- (b) Why is it important to measure a country's inflation rate accurately? (10)

- (a) Explain the meaning of the phrase 'the natural rate of unemployment'. (5)
- (b) What are its causes and how may the government reduce it? (20)

Tackling the question

Part (a) is the kind of question that can get a candidate full marks. A dictionary of economics is an essential course companion for an A-level economics student, particularly when one considers how many marks can be obtained for good clear definitions. Part (b) requires a good knowledge of both labour market economics and supply-side policies. It will also be relevant to discuss the failure of Keynesian reflation to cure natural unemployment. Remember the importance of the expectations-augmented Phillips Curve.

Answer

Guidance notes

(a) The **natural rate of unemployment** is a phrase associated with the New Classical School of economic thought, which tends to view the economy as being consistently at or near the full employment level. It can be defined as the percentage of the workforce which is unemployed when the labour market is in equilibrium. Some unemployment will exist despite the demand for labour being equal to the supply of labour at the prevailing market wage. It embraces structural and frictional categories of unemployment and focuses on obstacles to the supply of labour rather than problems associated with a deficiency in aggregate demand. Therefore, its solution rests with supply-side policies and these will be discussed later.

(b) The causes of natural unemployment are imperfections in the operation of the labour market, particularly those associated with trade union activity, employment legislation and the social security and taxation system, the effects of which are to restrict the supply of labour and push up wages. This argument is illustrated in Figure 1 where initially it is assumed that no market obstacles exist and so

No more than a paragraph for 5 marks. It is tempting to write at length when a definition is all that is required. There is always a danger of including in (a) material relevant to (b).

the supply of labour is at its potential level, labelled by the supply curve S_p . The demand curve for labour by firms is shown by D_L , where the equilibrium wage is OW_e and OQ_e people are employed.

However, the inclusion of labour market obstacles has the effect of reducing the supply of labour to less than its potential level, indicated by the actual supply curve S_a . Now there is a higher equilibrium wage OW_1 and a lower level of employment OQ_1 . The distance NU is natural unemployment since it represents people who would work at this wage if labour market obstacles did not exist. Part of natural unemployment could be regarded as being of a voluntary nature in the sense that it may be possible to obtain work by offering labour services at a lower wage, though in some firms employer–union agreements in respect of wage and manning levels make this impossible.

This essential diagram demonstrates a key difference between Classical and Keynesian theory. According to Classical theory, if you are unemployed it's your fault because you are asking for too high a wage. However, the Keynesian view is that the lack of aggregate demand in the economy is the problem – the fault of the government, which manages aggregate demand to reach full employment output.

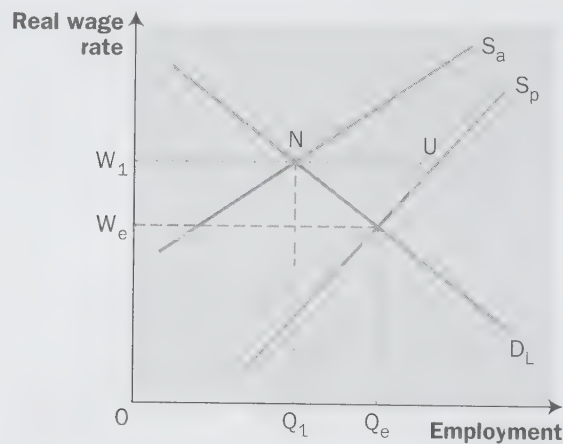


Figure 1

New Classical economists tend to believe that trade unions may increase natural unemployment by restricting the supply of labour to a particular industry through, for example, the operation of closed shop agreements or by the threat of industrial disruption, which may lead to wage rises in excess of the general market rates. Similarly, the establishment of minimum wage legislation in certain occupations is believed to make it less attractive for firms to employ workers. Such firms instead resort to the use of more capital in the production process or even fail to expand.

Social security benefits and high levels of personal income tax are believed to reduce the incentive for some people to take work, especially in the low-pay sector of the economy. Such individuals are caught in an unemployment/poverty trap. The time taken by people to search for suitable jobs may also increase (search unemployment) because the opportunity cost of being out of work is relatively low. This is identified in Figure 1 by the growth in natural unemployment, expressed by the horizontal gap between the supply curves S_a and S_p , as the wage rate falls.

Another aspect of natural unemployment is the geographical and occupational immobility of labour. The major causes of geographical immobility include social and family ties, home removal costs, variations in average regional house prices and a lack of information on jobs available in other parts of the UK. Occupational immobility arises from the difficulty in transferring labour skills from one occupation to another: for example, former textile workers seeking employment in the financial services industry. It is often argued that technological progress, such as the greater use of computers in production, has accelerated the skills mismatch.

The different causes of natural unemployment suggest that a variety of government measures is required to reduce its level, the emphasis being placed upon **supply-side** policies. These are policies intended to increase the economy's productive capacity by increasing the supply of factor inputs and their productivity. Considerable controversy exists among economists over what such policies should entail.

The New Classical economists tend to favour government legislation to reduce the bargaining power of trade unions by, for example, introducing secret ballots, making secondary picketing illegal and making it harder to implement closed shop agreements. Employers should thus find it more attractive to employ labour at the lower wage. Other measures they support include the abolition of wage councils and a reduction in both personal income tax and social security benefits in order to reduce the unemployment/poverty trap. They believe that the overall effect will be to shift the actual supply curve for labour nearer to its potential supply, thereby lowering the natural rate of unemployment (see Figure 1).

Keynesian economists, on the other hand, tend to place more emphasis upon the provision of training schemes and improvements in information flows concerning the jobs available in other areas. They also favour an active regional policy whereby firms are offered financial incentives, such as investment grants and interest-free loans, to relocate premises to regions of high unemployment, and where labour receives assistance in moving to areas of greater employment opportunity.

Keynesians, many of whom place little emphasis on the notion of a natural rate of unemployment, are also associated with the advocacy of reflationary policies to solve demand-deficient unemployment. However, demand reflation would not reduce the natural rate of unemployment even if it reduced measured unemployment temporarily. One explanation of this is provided by Milton Friedman's reinterpretation of the Phillips Curve, where he refutes the existence of a long-run trade-off between the rate of inflation and the rate of unemployment. Instead, he argues that it is a vertical line based at the natural rate of unemployment, as shown in Figure 2.

Contrast Keynesian to Classical theory. The apparent division between the two schools of thought is much more blurred than some textbooks suggest.

Initially the economy is in equilibrium at point N on the short-run Phillips Curve labelled X. The natural rate of unemployment is shown by the distance ON where there is zero inflation. Friedman makes the assumption that the current rate of inflation determines workers' and firms' expectations of its future level (therefore the expected rate of inflation on the Phillips Curve P_e is equal to zero). There is no pressure upon prices or wages to change.

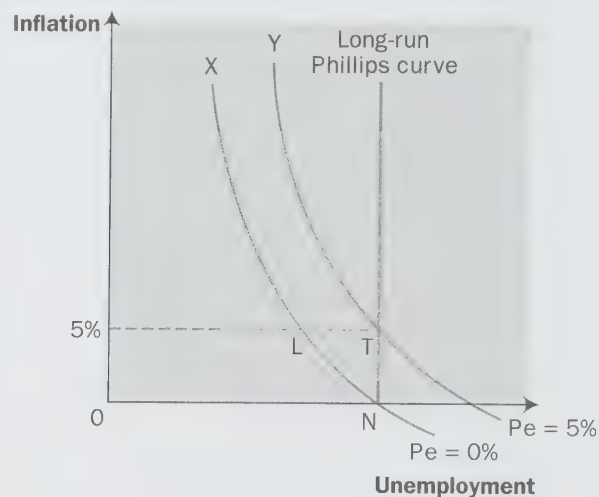


Figure 2

However, if the government attempted to reduce the natural rate of unemployment below ON by expansionary fiscal and monetary policies, it would lead to an upward pressure upon wages and prices. Firms will attempt to increase output by employing more workers, but in order to attract them wages must rise, say by 5%. The extra production costs will have been passed on to consumers in the form of a similar price rise for goods and services; indeed, in Friedman's monetarist theory, it will be the initial price rise that made it profitable to bid for extra labour.

The assumption that workers suffer from money illusion is debated by many. It is worth investigating the 'rational expectations' view of worker behaviour.

In the short run, workers suffer from **money illusion**: that is, they confuse the change in money wages with a change in real wages. Thus, some of the unemployed will take jobs in the belief that real wages have risen and so the economy moves to point L on the Phillips Curve. In the long run, they realise prices have also risen by 5% and that real wages have remained the same, and so withdraw from employment.

Similarly, firms which initially demanded more labour in the belief that real wages had fallen will also realise their mistake and cut back on employment. Unemployment rises back to its natural rate where the expected rate of inflation is based on the current level of 5%. The economy, therefore, moves to point T on a new Phillips Curve labelled Y. If the government persists in attempts to reduce

natural unemployment by reflationary measures, it will lead to accelerating inflation as the process is repeated.

In conclusion, government policies aimed at reducing the natural rate of unemployment should concentrate upon measures which limit labour market imperfections. Such policies form part of supply-side economics, over which there is much controversy.

General comments

The Phillips Curve is very important in the Keynesian versus monetarist argument. It is also important to be able to distinguish adaptive expectations from rational expectations and the short-run Phillips Curve from the long-run one. Is the original Phillips Curve, drawn almost 40 years ago, of any relevance today? Has the Phillips Curve shifted to the right in recent years?

Related question

- (a) Distinguish between demand-management policies and supply-side policies. (10)
- (b) In recent years why have supply-side policies been seen as more appropriate when dealing with high levels of unemployment? (15)

Essay 10

- (a) Explain what is meant by the government spending multiplier. (10)
- (b) How might increases in government spending and cuts in taxation affect output, employment and the price level in an economy? (15)

Tackling the question

Try to avoid too much maths/equations in part (a), especially when a diagram showing the effect of a rise in injections can be so informative. Don't be too concerned about mixing AD/AS diagrams with the more traditional Keynesian style. However, it is important to remember that the big advantage of using AD/AS is that it can be used to illustrate both the Keynesian and monetarist interpretations of how a rise in government spending affects the economy. This is important in part (b) when the two opposing views need to be explained.

Answer

(a) Government spending is one of the most important components of national expenditure. In the following analysis it is assumed that the increase in government spending is a net increase and not simply a transfer from consumer spending, which would have no multiplier effect.

The **multiplier** is the ratio of the total increase in national product to the amount of the initial increase that brought it about. The concept is illustrated in Figure 1.

Here, there is an increase in government spending from G to G_1 . Government spending is one of the injections into national income, the others being investment (I) and exports (X). An increase in government spending thus raises the level of total injections (providing the others remain constant) from J to J_1 . Given the steady rate of withdrawals from national income of taxation (T), savings (S) and imports (M), the increase in injections (ΔJ) will produce a larger increase in national income (ΔY). The ratio of these two increases $(\Delta Y)/(\Delta J)$ is called the multiplier (K). The value of the multiplier

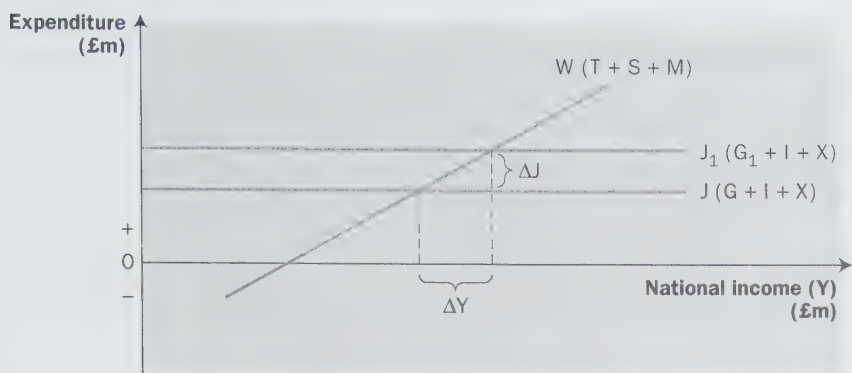


Figure 1

depends on the slope of the W curve – if the angle of W is made more acute then the increase in income is bigger.

In equilibrium total withdrawals must equal total injections so:

$$T + S + M = G + I + X$$

The government spending multiplier can be calculated using the following formula:

$$\frac{1}{1 - MPC} \quad \text{or} \quad \frac{1}{MPW}$$

where MPW is the marginal propensity to withdraw (MPS + MPT + MPM).

Thus, if the marginal propensity to withdraw is one-fifth, i.e. if a fifth of any change in income is taken up by taxes, imports and savings, then the multiplier is the reciprocal of one-fifth or $1/\frac{1}{5}$ which equals 5. However, the value of the multiplier in Britain has recently been much reduced by the high propensity to import, i.e. the tendency for people to spend a high proportion of any increased income on imported goods (e.g. cars and electrical goods).

(b) An increase in government spending combined with cuts in taxation is usually termed a reflationary fiscal policy, which is associated with a budget deficit. This type of policy, often called Keynesian demand management, could be used to raise aggregate demand and, via the multiplier process, real national income. This Keynesian approach could be used to reduce unemployment during a depression, shifting the aggregate demand curve to the right from AD to AD₁ as shown in Figure 2.

This policy of reflation, according to Keynesian theory, will take the economy closer to point Q, which is full employment, and thus to a lower level of unemployment. As the economy moves closer to full employment, prices will rise as shortages of factors and products, such as raw materials, occur. Demand-pull inflation and cost-push inflation will become more established in the economy as full employment comes closer.

This diagram says more than a lot of words. It shows to a reader that you understand that any injection will raise national income by more than the amount injected (in this case by government spending).

Stick to the government spending multiplier not other multipliers. There is also a tax multiplier, a foreign trade multiplier and an investment multiplier.

AD/AS analysis is essential to macroeconomics. The old 'Keynesian cross' diagram does not have the versatility of being able to show both Keynesian and monetarist macroeconomic policies.

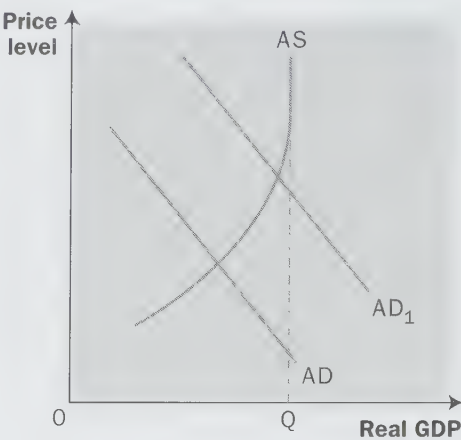


Figure 2

The views of monetarists on the effects of reflation are very different. They assert that there is both a short-run and a long-run aggregate supply curve. In the diagrams below, the economy is in equilibrium at A and the labour market at X. Expectations play an important part in this theory. If the government reflation the economy, aggregate demand will shift from AD₁ to AD₂ as shown in Figure 3.

This will be perceived by firms as an opportunity to raise prices. As wages will not be expected to increase, firms believe that real wages will fall, so they move down their demand curve for labour from X to Z (Figure 4). The workers' view of the situation is very different. They interpret increased demand for labour as an opportunity for money wages to rise. As they expect prices to remain at P₁, their expectation is that real wages will increase, so they move up their supply curve for labour from X to Y.

Thus firms and workers interpret what is happening differently, but, in the short run, employment and output rise in the economy – moving from A to B on the SRAS curve in Figure 3. This move to Y₁ can only be temporary because it is based on misconceptions about wages and prices. Firms have based their expectations of wages on

Keynesians versus monetarists. Remember Keynesians and monetarists disagree most about the aggregate supply curve; there is broad census that the aggregate demand curve is downward sloping.

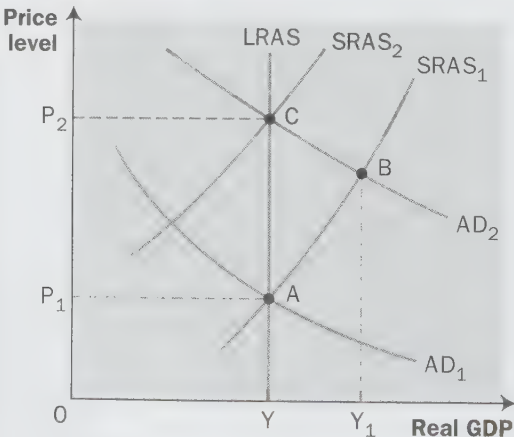


Figure 3

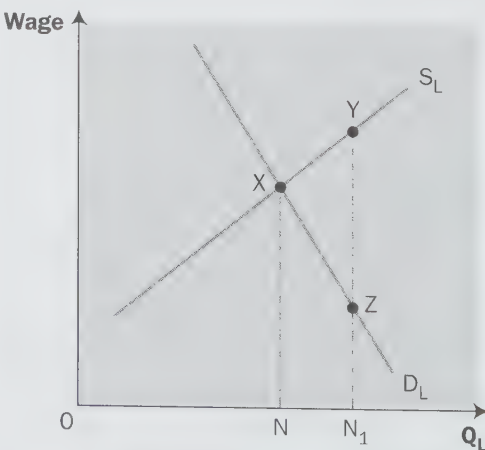


Figure 4

the levels paid in the past; so as increased demand in the labour market raises money wages, they adapt their expectations to what they experience. Similarly, workers who thought prices would remain unchanged adapt their expectations as prices rise. The effect of this is that firms move back up their demand curve for labour as they realise that real wages have not declined, and workers move back down their supply curve as they learn that prices as well as wages have risen, so their real wages will not rise.

Employment and output will fall and the short-run aggregate supply curve will shift to the left. Long-run equilibrium is restored when output returns to the original level Y and the labour market is operating at the original real wage. Money wages and prices are now higher. The $SRAS_2$ curve which is associated with higher money wage rates intersects the LRAS curve at a higher price level, P_2 . Thus, according to monetarists, reflation will in the long run raise money wages and prices only, but not output and employment.

Each short-run aggregate supply curve is associated with a given level of money wage rates. The vertical long-run aggregate supply curve will shift to the right as a result of supply-side policies.

General comments

The multiplier is associated with Keynesian economics because of its relevance to demand management in the economy. Don't forget that there is also an investment multiplier, a tax multiplier, an export multiplier and even a balanced budget multiplier. It is important to be aware of the relationship that exists between the multiplier and the accelerator in an economy – known as the multiplier/accelerator interaction. This relationship tends to magnify the upswings and the downswings of the trade cycle.

Related question

- (a) How do 'automatic stabilisers' affect an economy? (10)
- (b) What, if anything, can governments do to mitigate the worst effects of the trade cycle? (15)

Essay 11

Critically evaluate the claim that welfare spending acts as a brake on economic growth.

(25)

Tackling the question

This is a controversial question which economists have argued about for many years. Essentially the basis of the question is to test whether you can contrast Keynesian and monetarist approaches to government spending. In recent years the argument has been moving in favour of lower welfare spending to promote both employment and growth. A balance will be required in your arguments though.

Answer

An economy is growing when its productive capacity is increasing. This means that its production possibility frontier is moving out to the right.

Economic growth can be defined as a rise in real gross domestic product and it is generally believed that a rise in real GDP brings about higher living standards in a country. A high level of economic growth is seen as a key macroeconomic objective and a government's success is often judged by its ability to increase the economy's growth rate.

Welfare spending is an important part of the UK government's expenditure. It includes transfer payments such as the job seekers' allowance, housing benefit, family credit, pensions and income support. Since the formation of the welfare state just after the Second World War, governments have committed themselves to welfare spending to relieve poverty and provide the poorest and most disadvantaged in society with a basic standard of living. Until recently the growth of welfare spending was not seriously questioned by successive governments in the UK. However, the Thatcher government in the 1980s began to question the huge expansion in welfare spending, particularly as it was growing year on year faster than the rate of growth of GDP itself. By 1994 the Social Security Secretary, Peter Lilley, was concerned that welfare spending was out of control and likely to cause long-term damage to the economy. The ageing population and high levels of unemployment were putting such a strain on the welfare budget that reform of the welfare state was given a high priority by the government.

The view that high welfare spending damages economic growth is based on an understanding of the economy closely linked to the free market/monetarist views of Milton Friedman. It is believed that because a high level of welfare spending boosts overall government spending, it causes **resource crowding out**. If government spending is growing as a percentage of GDP, it means that resources that could be used by the private sector are being used by the government. The private sector is believed to be the wealth-creating part of the economy through which economic growth will take place. The policy of the present government is to reduce government spending to 40% of GDP from its current level of 43%.

If welfare spending is growing, this could mean that government borrowing is also growing. A high budget deficit (PSBR) can also affect economic growth according to some economists. If governments need to borrow heavily, this can cause **financial crowding out** because there are fewer funds available for the private sector to borrow. Also high levels of government borrowing can mean high long-term interest rates in the economy; this too will affect the ability of the private sector to borrow.

The availability of cheap long-term loanable funds is the key to high investment and high economic growth. Thus if welfare spending is the main cause of government spending, and borrowing is growing excessively, resource and financial crowding out could put a brake on economic growth. Monetarists also believe that high levels of government spending and borrowing fuelled by welfare spending cause severe inflation because the money supply expands. High inflation has also been blamed for lower levels of economic growth. Moreover, they believe that high welfare spending results in a high-tax economy, which acts as a disincentive to industry/business to expand and invest and also to individuals to work harder/take risks. A high-growth economy needs low taxation to create the right conditions for the business/private sector to create wealth and to grow. There is also a strong belief among those economists who want 'less government' that a society with high welfare payments to the disadvantaged, such as those who are unemployed, becomes welfare dependent. A high-growth economy needs a flexible labour market without high welfare payments distorting the incentive to work. Supply-side economics sees the reform of the welfare system as a key part of promoting economic growth.

The Economist (26/10/96) argued that the 'tiger economies' of the Far East (Malaysia, Taiwan, Singapore) have such high growth rates partly because of the small size of their public sectors. The article says 'the tigers' public spending averaged 15% of GDP last year; in the ex-communist countries (Poland and Hungary) and the poorer European Union countries (Greece, Portugal, Spain) the figure is around 50%. Much of the difference is due to pensions and other

That is the case for the view stated in the question. The view that welfare spending needs reform has almost become accepted wisdom in many economies. In the UK the welfare state as it was conceived in 1945 has arguably little relevance to modern Britain.

welfare payments.' Other factors obviously affect growth rates, but is the low growth of the EU partly explained by a welfare payments system that is out of control?

There is, of course, an alternative view. It can be argued that high welfare spending is important to economic growth. When people in society receive welfare payments, they will spend the bulk of this income in the economy. Spending by consumers generates higher demand. One person's spending becomes the income of someone else, i.e. a big rise in welfare benefits will boost the income of supermarkets, which then order more supplies from producers. The effect in the whole economy is to raise the level of national income (GDP) and thus economic growth. This is often called the 'multiplier process' and is closely associated with the economic theory of John Maynard Keynes, who had views opposed to the monetarist free market economists. Welfare spending is thus seen as playing a key part in maintaining the level of aggregate demand in the economy. Some Keynesian theorists see welfare spending as an 'automatic stabiliser' to the economy. If growth slows or becomes negative during a recession, welfare payments will automatically rise with rising unemployment. The extra spending these welfare payments inject into the economy will, via the multiplier process, lead to a rise in national income and economic growth, thereby preventing the recession becoming a deep depression.

That is the case against. Many economists still believe in the need for welfare spending as an essential tool in redistributing income and wealth. Few countries have the ability to generate sufficient tax revenue in their economies to pay for extravagant welfare spending. Therein lies the problem confronting governments in the 21st century.

Welfare payments are seen as important in providing the poorest and also the disadvantaged in society with an income which will enable them to avoid abject poverty. Welfare payments thus help to keep the population's health/nutrition at a reasonable level. An unhealthy population is not likely to be a productive one. A productive working population is an essential ingredient for a high-growth economy. The universal availability of child benefit (not means tested) is often criticised as being a waste of government money, merely encouraging people to have too many children. However, to secure the next generation and thus the next wealth-creating working population, parents need a subsidy from the taxpayer so that the cost of rearing children is spread among all of the population. A society with less incentive to rear children will have an ageing population and the small working population will need to be taxed heavily to support society's elderly dependants. This is hardly likely to lead to high economic growth.

A conclusion can pull it all together. When essay questions are unstructured like this one, the conclusion

In conclusion it can be strongly argued that welfare spending can both restrain economic growth and also help to promote it. The key problem that society needs to address is whether welfare spending needs checks to prevent it growing faster than the rate of growth of

the economy itself. When this happens, most economists seem to agree that the rate of economic growth will be threatened. However, the rate of economic growth depends on many other, possibly more powerful factors, such as the level of savings and investment as a percentage of GDP, the level of economic freedom, technical change, and education and skill levels in the economy.

should draw together the key issues in a balanced way. It is important that the question is treated as a normative issue with no clear answer – only strong arguments on both sides.

General comments

The reform of welfare is a big issue for government spending in the years ahead. With welfare payments often dissuading people from work and an ageing population increasing the demands on public spending, a comprehensive reform of welfare spending is high on the government's agenda. The structure of welfare devised in the 1940s is no longer applicable in the 1990s and beyond and reform is inevitable.

Related question

- (a) Why does the poverty trap still exist in the UK? (10)
- (b) How could the tax and benefits system be reformed in the UK to remove the poverty trap? (15)

**A-Level
Economics:
Essays**

(a) What are the advantages of free trade? (12)

(b) In view of the advantages of free trade, why does protectionism exist? (13)

Tackling the question

This is a typical question on trade. The first part needs to mention some of the theory that underpins the principle of free trade, such as **absolute and comparative advantage**. For the marks available it is important to develop the answer beyond the theory. In the answer below you will notice the use of plenty of economics jargon, such as division of labour and production possibility frontier. This is an important way of strengthening an essay. Part (b) should concentrate on the case for protectionism or, put another way, why countries use import controls.

Answer

Guidance notes

(a) The general case for international trade centres on the proposition that countries can attain levels of production, consumption and economic welfare which are beyond the production possibility frontier open to them in a world without trade. If a country concentrates its scarce resources and factors of production on producing the goods in which it is most efficient, total world production can increase. Gains from trade are possible if countries can agree to exchange that part of their output which is surplus to their needs. Much of the theory behind the gains from trade is laid out in work by Adam Smith and David Ricardo. Their ideas were formulated into the theories of absolute and comparative advantage. Another argument in favour of free trade is competition. Within an isolated and relatively small, closed economy, markets may be too small to be competitive and monopoly may predominate. Exposure to international competition is likely to make markets more competitive and hence more efficient.

The benefits of international division of labour (specialisation) and economies of scale also emerge from free trade. If a country specialises in producing the goods in which it is already most efficient, large-scale production may allow it to benefit from in-

Bring in the theory! Countries will gain from trade when there are differences in their opportunity cost ratios. It is possible for a country to have an absolute advantage in many products but a comparative advantage in only a few.

Take each point in turn.
Don't go into details which
are interesting but
nonetheless irrelevant.

creasing returns to scale and economies of scale. Long production runs allow firms to introduce more advanced forms of machinery and improved technology. Without free trade between countries, the limited extent of the home market may prevent a country from benefiting from economies of scale.

Free trade also gives consumers in a country an increased choice of goods, thereby increasing the welfare of the nation. In addition, free trade promotes good relations between countries and because of their increased dependency on one another makes political and military conflict less likely. The benefits of free trade have long been recognised in theory, but more recently the General Agreement on Tariffs and Trade (GATT) has been set up to promote free trade throughout the world. GATT is now called the World Trade Organisation (WTO).

(b) The case for specialisation and trade is based on the proposition that all countries taken together will gain in terms of increased production, efficiency and welfare, providing that the terms of trade lie within the opportunity cost ratios. However, there is no guarantee that the gains will be distributed equally amongst the trading countries. The gap between the industrialised countries of the 'North' and the developing countries of the 'South' is evidence of this.

The deliberate imposition of restrictions on trade, such as tariffs and other forms of import control, is known as **protectionism**. Such measures create barriers to trade. There are several arguments in favour of protectionism.

Protection may be justified during the early growth of an 'infant' industry. Indeed, the infant industry argument is quite strong when there is scope for industries to benefit from economies of scale. For example, a newly established industry in a developing country may be unable to compete with established rivals in other countries which are already benefiting from economies of scale.

Protectionism may also help a country avoid the dangers of overspecialisation. The benefits which result from specialising in accordance with the principle of comparative advantage will not be obtained if the disadvantages of the division of labour outweigh the advantages. Diseconomies of scale may be experienced. Overspecialisation can also cause a country to be particularly vulnerable to sudden changes in demand or in the cost and availability of imported raw materials or energy, or to new inventions and changes in technology which eliminate its comparative advantage. The greater the uncertainty about the future, the weaker the case for complete specialisation.

Protectionism can also be used to alleviate domestic unemployment. The model of comparative advantage assumes that factors of production are both fully employed and perfectly mobile within countries. If large-scale unemployment exists, there is a case for using

factors inefficiently rather than not employing them at all. Countries may also regard as unacceptable the costs of structural unemployment resulting from complete freedom of trade.

Countries may also use protectionist measures to prevent 'dumping'. This occurs when exports are sold at a price below their cost of production and below the market price in the country of origin. This practice can cause unemployment in the domestic economy and is seen as unfair competition.

Protectionist measures such as tariffs are sometimes justified as a means of raising revenue for the government, although in most developed economies this is a rather insignificant source of government revenue. There are also political and social arguments for protectionism. Economic sanctions have been used for centuries to support political decisions. An embargo on trade may weaken a political enemy and it may also encourage co-operation between politically sympathetic countries. Embargoes and other import controls are often imposed on trade in armaments and military goods. Restrictions are also commonly placed on the trade in harmful goods (demerit goods) such as narcotic drugs. Restrictions may be imposed for strategic reasons, to ensure that a country is relatively self-sufficient in time of war.

The question is asking why protectionism exists. It is important not to talk in any great depth about the methods of protection a country could introduce, such as tariffs and quotas.

Many countries embrace the ideals of free trade, but do not always practice what they preach. In times of rising unemployment, countries are tempted to protect their industries with tariffs on imports. Despite the efforts of GATT/WTO to promote free trade, protectionism is still a significant aspect of world trade. The EU may be a single free market, but it has a common external tariff. The EU tariffs/duties on agricultural goods were largely to blame for a major disagreement with the USA at the recent GATT/WTO Uruguay Round negotiations.

As a member of the EU, the UK's powers to introduce protectionist measures are restricted to the common external tariff policy decided between member states. The EU negotiates as a trade bloc in world trade negotiations.

General comments

Questions on trade may also focus on the reasons for the growth of trade blocs such as the EU and NAFTA. Trade creation and trade diversion are important issues when considering the costs and benefits of trade blocs. The issue of free trade, which the WTO is working towards, has thrown up problems for the developing world and environmental issues. Free trade has damaged the Caribbean banana producers who are no longer entitled to EU protection and also the intellectual

property rights of Indian herbal medicines. Environmentalists believe that free trade does not protect endangered species.

Related question

- (a) Distinguish between trade creation and trade diversion. (8)
- (b) What are the advantages and disadvantages of trade blocs such as NAFTA? (17)

- (a) Identify the main types of import control. (8)
- (b) Discuss the economic arguments for and against protectionism. (17)

Tackling the question

It is important not to go into too much depth in part (a) as there are only 8 marks available. Clearly when you see the word **identify** in the question, detailed analysis is not needed. In part (b) a diagram showing the **welfare effects** of a tariff will pull the standard of the essay up and provide a break from writing. Essays can be made far easier on the eye by the use of well-positioned diagrams.

Answer

Guidance notes

(a) Import controls are an aspect of protectionism. The use of protectionism by a country prevents the operation of free trade. Many countries use import controls despite the economic advantages of free trade and the efforts of organisations such as the World Trade Organisation (WTO), formerly GATT. Indeed, during the 1980s, there was a growth in protectionism in many aspects of world trade. Protectionism often becomes more apparent in the world economy during periods of depression when countries seek to protect employment in their industries.

The main forms of import controls are tariffs, quotas and embargoes. A **tariff** is a tax imposed on imported goods in order to raise their prices to domestic price levels. This prevents domestic goods being undercut by imports and artificially restores competitiveness. Tariffs can be of an 'ad valorem' (percentage) type or 'specific' (a fixed amount in £ per item). A **quota** is a limit placed on the quantity of goods which can be imported. A quota can be a maximum limit of goods allowed into a country per month or per year, or possibly a maximum percentage share of the home market. An **embargo** is an absolute ban on certain imports. This can be a ban on all goods from a single country or a particular good from all countries.

Sometimes these can be classed as tariff and non-tariff barriers to trade. Tariffs are nowadays seen as a little unsubtle and bring the wrong headlines. However, non-tariff barriers – which may include complex health and safety

regulations or elaborate technical standards – are seen as import controls by the back door.

Mention the theory of free trade. Free trade is based upon both absolute and comparative advantage. Trade will always be of mutual benefit to countries if there are differences in their opportunity cost ratios.

These diagrams can convey real understanding in a simple way. The welfare effects of a tariff show why free trade is such an important goal for the WTO. Is this too basic in its conclusion about the benefits of free trade? A free trade policy in the banana trade would ruin some Caribbean producers.

Embargoes are often imposed for political or military reasons rather than economic ones. Other forms of import controls are import licences, import deposit schemes and foreign exchange controls. **Import licences** mean that importers have to obtain licences from a government department before imports can be authorised. **Import deposit schemes** demand that importers deposit payments for imports in a bank well in advance of the arrival of goods. Both these measures deter the importer and regulate imports. **Foreign exchange controls** involve the central bank of a country regulating, i.e. limiting, the amount of foreign exchange available for importers.

(b) Protectionism is very much against the principles of free trade. The idea of free trade is to see the full benefits of international division of labour (specialisation) and economies of scale. If free trade is allowed to develop, the theory of comparative advantage will see countries concentrating on the production of goods and services where they have the greatest expertise. The idea of free trade is to see the most efficient allocation of the world's resources. Protectionism prevents this happening and leads to a misallocation of resources. The efforts of the WTO/GATT over the last 40 years have been directed towards the promotion of free trade.

Protectionism, particularly through the use of import controls, often leads to a fall in world trade with output and employment falling. It can sour relations between countries and bring retaliation if one country imposes controls on another. In recent years the common external tariff and the agricultural subsidies of the EU have soured trading relations with the USA. The common external tariff has also meant that European consumers have been deprived of relatively cheap consumer goods from the Far East. Many argue that the strongest case against protectionism is that it deprives consumers of a variety of goods at free market prices. Import controls may well deny free choice and keep prices artificially high. The quality of goods available may be lower if the availability of foreign goods is restricted.

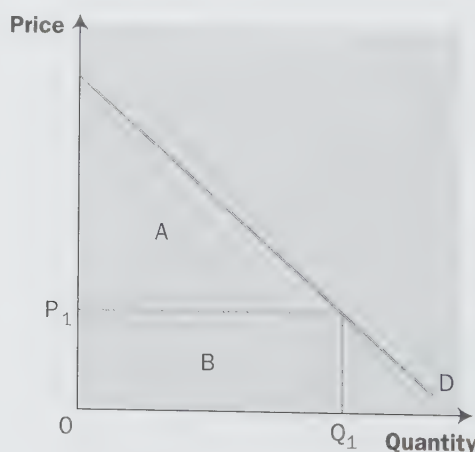


Figure 1

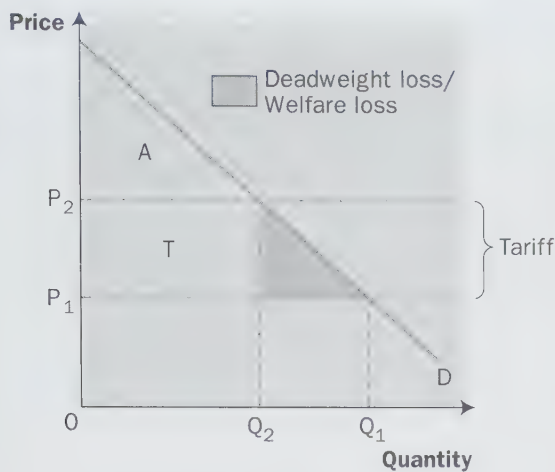


Figure 2

Protectionism in the form of a tariff produces a welfare loss to society. In Figure 1 a product is initially imported at price P_1 under conditions of free trade. Area B is the producer's revenue and area A is the consumer surplus. In Figure 2, if the government now puts a tariff on the import, the price of the product rises to P_2 and the quantity demand falls to Q_2 . The consumer surplus (A) now shrinks and this lost surplus is divided between government tariff revenue (T) and a welfare loss (the shaded area). It is a deadweight or welfare loss because what was consumer surplus has been lost entirely – being transferred to neither the producer nor the government in tax revenue.

Many countries do practise protectionism, often to protect domestic industry and employment from foreign competition (e.g. the multi-fibre agreements for the European textile industry). Protectionism enables jobs to be protected, often in vital industries such as steel or car manufacture. Sometimes protectionism is used to allow the orderly run down of an industry which has lost its comparative advantage. Protectionism allows the industry to restructure (perhaps by moving into a different niche of the market) without having to face short-term dramatic job losses.

Protectionism will also help solve balance of payments problems, at least in the short term, by lowering imports and maybe increasing exports (through export subsidies). Protectionism is often used to prevent the benefits of a Keynesian reflation 'escaping' into high import demand. This is particularly relevant for a country with a high MPM.

The world's economic resources are not spread evenly and some countries may suffer permanent disadvantages in world trade. The only solution for these countries is the use of protectionist measures. This may be the case when one compares the developing world and the industrialised world (the north/south problem).

General comments

The free trade versus protection argument is a global issue. Disagreements between the USA and both China and Japan have caused major rows between the countries. Also agreements such as NAFTA have provoked problems in the USA itself from workers who feel that their jobs will be destroyed by cheaper goods coming in from Mexico. In the short term at least, low-wage economies with flexible labour markets will be attractive for multinational companies. In the USA consumers will welcome free trade because of cheaper goods, but workers in the industries threatened by cheap imports will be much less enthusiastic.

Related question

- (a) Distinguish between tariff and non-tariff barriers to trade. (8)
- (b) Can less developed countries enjoy economic development without using some form of protectionism? (17)

What are the arguments for and against a floating exchange rate?

(25)

Tackling the question

This essay has been set on many exam papers in recent years and is at the heart of whether the UK should have closer economic ties with the European Union (EU). The answer requires you to explain how exchange rates are determined and thus a diagram is essential. The cases for and against are fairly straightforward, but as there are as many reasons for as against it is best to keep the essay well balanced. Make sure each point is clearly distinguishable from the last one. An essay of this kind does need reference to experiences from the real world.

Answer

Guidance notes

Under a **floating exchange rate** system, the exchange rate is determined by market forces operating through the demand for and supply of a currency. This is in contrast to the **fixed exchange rate** system (of the **Bretton Woods** type) operative in the UK during the postwar period up to 1972, when the commitment to the par-value system was abandoned. Under the fixed exchange rate system, a central bank undertook to intervene in the foreign exchange markets in order to maintain the value of its currency within narrow limits either side of a par value.

Under the floating system, taking the example of the pound sterling (£) and the dollar (\$), the rate at which sterling can be converted into dollars is determined by the demand for and supply of sterling. Demand for sterling arises when US importers wish to pay for goods and services purchased from the UK. The supply of sterling primarily arises from the need of UK residents to exchange sterling for dollars to pay for imports. The equilibrium exchange rate is, therefore, determined by demand and supply in a particular time period. Figure 1 illustrates the demand and supply curves and the equilibrium exchange rate (ER). Changes in the exchange rate in a floating exchange rate system will reflect: changes in the quantity of

How are exchange rates determined? If an exchange rate is determined by the forces of demand and supply, it is said to be a flexible or floating exchange rate. The price of pounds is determined in a similar way to the price of tomatoes.

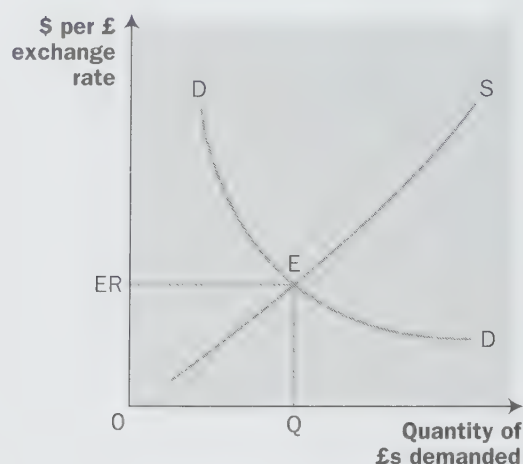


Figure 1

exports and imports of goods and services between the UK and the USA; differences in the rate of inflation between the UK and the USA (i.e. the effects of relative price changes); and capital transfers. Opponents of floating exchange rates frequently base their arguments on the experience in the 1930s, when (it is argued) the increase in business risks and uncertainty resulted in a decline in world trade. Proponents, however, suggest that floating exchange rates were unfairly discredited during this period.

The suggestion that floating exchange rates increase uncertainty results from the fact that an importer cannot be certain exactly what price he or she will have to pay for goods on delivery due to movements in the exchange rate. For world trade to be profitable to both parties, the exchange of goods must take place within the limits set by the domestic alternative cost or price ratios and frequently these limits are quite narrow. As a result, profit margins may be quite small and can be easily eliminated by an adverse movement in the exchange rate. The increased risk may deter businesses from partaking in foreign trade at all, with the subsequent loss of the gains from trade.

As a currency is bought and sold as a commodity in its own right, speculative pressures exist. Thus, a further argument against floating rates is that they are subject to unrestrained speculative pressures which can exacerbate changes in the rate as rumours spread. Consequently, the exchange rate might move in a different direction to that which is required by the domestic economy (as reflected in its overall balance of payments position) because it reflects, instead, its speculative value as a commodity. Floating rates, in addition to being influenced by the demand and supply of imports and exports, are thus influenced by capital flows. When speculators expect a currency to depreciate they will move out of that currency into another, moving back again when it is cheaper. Alternatively they will move into those currencies which they expect to appreciate and out again after appreciation. In both cases, the successful speculator gains, as such activities help to bring about the change he or she

anticipates by augmenting underlying trends in the exchange rate. In the absence of any official countervailing intervention, they create a self-fulfilling prophecy. Short-term capital or 'hot money flows' move around the world in search of the most advantageous interest rates and, in so doing, exert pressure on currencies due to speculative trading in the currency as a commodity.

Ordinary trading relationships are also affected by currency movements. For example, where a firm is due to settle a debt in a currency which is expected to depreciate, settlement will be delayed until after the depreciation; alternatively, where an appreciation is anticipated, settlement will be made early. This increases business risks and may lead to a reluctance to partake in international trade.

Supporters of floating rates suggest that the period of the 1930s was not a sufficient basis for discrediting the principle. In particular, floating exchange rates were subject to the accusation of being a means of 'exporting unemployment' through depreciation of the currency, resulting in a retaliatory round of depreciations, leaving the situation as it was initially. Supporters of floating rates, however, suggest that this should not occur, provided governments only initiate depreciation when they have a balance of payments deficit and do not use the exchange rate as an instrument of domestic policy.

The suggestion that floating rates would be de-stabilised by speculative pressure is challenged by some economists such as Friedman. These economists suggest that speculation must be a stabilising influence in a floating system since profitability requires that a speculator should buy a currency when it is cheap and sell it when it is expensive. If speculators buy when cheap and sell when expensive, they will reduce the cyclical fluctuation in the exchange rate and stabilise it around its trend value. The variability of floating exchange rates need not be a serious problem for traders, as the amount of risk has been reduced by the development of forward markets. Forward markets exist to enable traders to make contracts for future payments at rates which are known currently, sufficiently to offset the major risk element. However, total risk elimination for traders is not possible even with the sophisticated network of forward markets.

Supporters of floating rates suggest that one of the major advantages is that the balance of payments becomes self-correcting through movements in the exchange rate, which has the additional advantage of alleviating the requirement for substantial foreign currency reserves. Balance of payments deficits result in a gradual decline in the exchange rate to a lower equilibrium: the price of exports falls and they increase in volume, and the price of imports rises and they decline in volume, until a balance is established. This occurs without the severe shocks to the economy which changes in fixed rates can create. The argument is that the change in resource allocation

Keep the arguments balanced. There are as many points in favour as there are against. The fixed versus floating exchange rate argument has raged for many years and the UK has been in and out of both systems.

required by changes in comparative advantage, reflected through the balance of payments, can occur progressively and at a pace dictated by the changes taking place in the costs and profitability of resource allocation rather than by sudden, severe jumps dictated by speculative pressures, as would tend to be the case under a fixed rate system. Possibly the greatest advantage of floating rates is that they allow greater flexibility of domestic economic policy. Domestic policy decisions are not dominated by exchange rate considerations and the need to protect the reserves. Theoretically, in a flexible exchange rate system, movements in the exchange rate equate the demand for and supply of the currency and thus ensure that (for example) the net capital inflow is equal to a trade deficit. There is, therefore, greater independence of domestic policy-making.

Floating exchange rates also have the effect of providing a degree of isolation of the domestic economy from the world economy, so that in some respects, the economy will be similar to a closed economy. The level of demand for UK goods will be isolated from changes in foreign incomes by movements in the exchange rate. The counterpart to this proposition, however, is that the level of domestic income is more sensitive to changes in the level of money expenditure. In policy terms, the multiplier effects of monetary and fiscal policy will be greater with a floating rate than a fixed rate and, hence, mistakes in demand management are likely to have greater consequences. Floating exchange rates do, however, give better control of the money supply than a fixed exchange rate system and enable the authorities to maintain control of the nominal money stock, in contrast to the fixed exchange rate system where control of the money supply is possible only in the short run, the money supply being an endogenous variable under fixed exchange rates.

The period of floating rates after 1972, whilst not providing an altogether valid test (as there was intervention when the rate fell too fast, or rose too rapidly), did not fulfil the worst fears of those opposed to floating rates. But at the same time, it was not a panacea for all ills. The Exchange Rate Mechanism (ERM) of the European Monetary System (EMS) meant EU members returned to a fixed exchange rate system with fluctuations allowed within either $2\frac{1}{2}\%$ or 6% of a central rate with other ERM members. However, in the Autumn of 1992 the ERM came under severe pressure from speculators and both the UK and Italy left the system. High German interest rates – intended to deal with domestic inflation – coupled with uncertainty over the future of the Maastricht Treaty only added to the problems of the pound. Many experts believed that the UK economy could never recover from recession with the pound fixed at such a high exchange rate in the ERM. Free market/monetarist economists believe the pound and other currencies should float freely on exchange markets, echoing the famous phrase of the former Prime Minister, Margaret Thatcher: ‘you cannot buck the market’. In Autumn 1992 the pound was floating again and the future of the

ERM was uncertain with currencies 'floating' within 15% of a central rate. Many economists believe that the ERM is doomed in economies with no exchange controls. Nevertheless most EU members aspire to membership of the ERM within its narrow ($2\frac{1}{2}\%$) bands and ultimately Economic and Monetary Union (EMU), which includes a single EU currency.

At the moment the UK pound is allowed to float, and the recovery from the early 1990s recession can be attributed in part to the depreciation of sterling that occurred after the September 1992 exit from ERM – a powerful case for floating exchange rates! However, the collapse of the pound after it floated in 1972 caused import prices to rise to such an extent that the high inflation of the mid-1970s was partly attributable to the depreciating pound – a powerful case against!

Two opposing points to end on from recent UK experience. This gives the essay some balance and shows knowledge of some economic history. Examination boards often ask questions which include the phrase 'using examples from recent years'. Recent years probably means from 1979 onwards. This was when the first Thatcher government was elected and is always seen as a watershed in UK politics.

General comments

The arguments on the exchange rate issue will go on for some time yet. Membership of ERM for two years without devaluation is a precondition for membership of a single currency in Europe. Although the UK is not in the ERM at present, it could easily rejoin, probably at a lower rate than during its previous membership. ERM membership would impose restrictions on the UK's domestic monetary policy. During the UK's previous membership the worsening recession indicated that UK interest rates should be cut. However, to maintain the pound within its ERM limits high interest rates were needed.

Related question

- (a) To what extent can a fixed exchange rate system affect domestic monetary policy? (10)
- (b) Are there any advantages to having fixed exchange rates? (15)

Essay 4

- (a) Distinguish between the terms of trade and the balance of trade in goods and services. (10)
- (b) How might changes in the terms of trade affect the balance of trade in goods and services? (15)

Tackling the question

This question has a part (a) which requires the recall of knowledge and a part (b) which uses the material from (a). Part (b) is quite complex and requires careful thought. The key to a successful answer lies in understanding that the **terms of trade** involve changes in prices while the **balance of trade** concerns the value of goods and services, i.e. price \times quantity (volume). This is one of those questions where it is very easy to get mixed up and convey to the examiner real misunderstandings. Accurate definitions are required in part (a), giving a clear indication to the examiner that you know the difference between the two terms. In part (b) the key to a successful answer is to show how changes in the prices of exports and imports (the terms of trade) affect the value of goods and services (balance of trade in goods and services). The application of price elasticity of demand is very important – how do changes in export and import prices affect the demand for exports and imports?

Answer

(a) In trade involving barter the terms of trade are measured by how many exports have to be given up to obtain a given unit of imports. When currency is involved it is slightly different. Terms of trade is the name given to the relationship between the **prices** a country gets for its exports and the prices it pays for its imports. Essentially this is the relationship between what a country pays for its imports and what it earns from its exports. To calculate the terms of trade, indices of export and import prices are constructed, using a base year as 100. Equipped with these indices, changes are measured as follows:

$$\frac{\text{Index of export prices}}{\text{Index of import prices}} \times \frac{100}{1} = \text{Terms of trade}$$

If in a period of time export prices in the UK increased by a half whilst import prices remained the same, it is:

$$\frac{150}{100} \times \frac{100}{1} = 150$$

Such a movement is apparently favourable for the UK because it has to export fewer goods to afford a given number of imports. The rise in the index is a favourable movement in the terms of trade. A fall in the index could be brought about by a rise in import prices with no change in export prices. Suppose import prices doubled but export prices were unchanged, then the terms of trade would be:

$$\frac{100}{200} \times \frac{100}{1} = 50$$

The UK would now have to export more exports to obtain the same revenue to buy the same number of imports. This is said to be an unfavourable movement in the terms of trade.

The balance of trade in goods and services is often termed the 'current account' in the balance of payments accounts. It includes the **value** of exports and imports of tangible goods and services such as banking, tourism and shipping. Exports of goods and services earn the UK foreign exchange and count as a credit on the balance of payments accounts, whereas imports count as debit because they involve spending foreign exchange. The value of the imports is subtracted from the value of exports to arrive at a positive or negative balance. The balance of trade in goods and services can thus be either in surplus or in deficit, but the overall balance of payments, which also includes capital flows and official financing, must balance.

(b) If over a period of time a country's export prices rise faster than its import prices, then the terms of trade will become more favourable. However, rising export prices relative to import prices reflect domestic inflation at a higher level than competitor inflation. The same effect will come about when there is a rise in a country's exchange rate. Thus a favourable movement in a country's terms of trade will make a country uncompetitive in world markets. Falling demand for exports and a rising demand for imports may be a result of favourable terms of trade. Hence a deficit on the balance of trade occurs from favourable terms of trade.

However, much of the above analysis relies on the assumption that the demand for exports and imports is elastic. Elastic demand means that a rise or fall in price brings about a more than proportionate change in demand. More favourable terms of trade, which could be the result of the revaluation of a currency, will worsen the

Note that I have been precise here and not used complex examples to illustrate terms of trade movements. The understanding and examples demonstrated here will also help to unravel the more difficult part (b).

Note the emphasis on **price** and **value** to distinguish the terms of trade and the balance of trade. This clearly distinguishes the two terms to an examiner.

balance of trade if the sum of the price elasticities of demand for exports and imports is greater than one. This is known as the **Marshall–Lerner** principle. If favourable terms of trade lead to an improving balance of trade, then it is because the sum of the elasticities of demand for exports and imports is less than one. This means that demand is relatively inelastic. It is important to note that elasticities of demand for exports and imports are likely to be more inelastic in the short run than in the long run. This is because spending patterns take time to adjust to price changes. Thus a favourable movement in the terms of trade (rising export prices and falling import prices perhaps) may improve the balance of trade in the short run. However, in the long run demand may become more elastic and the balance of trade may consequently deteriorate. The phenomenon described above and shown in Figure 1 is called the reverse J-curve effect, which shows the short-run improvement in the balance of trade following a favourable movement in the terms of trade (possibly due to an upward movement in the exchange rate). In the long run, the balance of trade deteriorates as elasticities rise.

The use of diagrams in economics essays is very important. Not only does it show understanding, but it also complements your writing. It breaks up the essay too, which makes it easier on the eye for the reader.

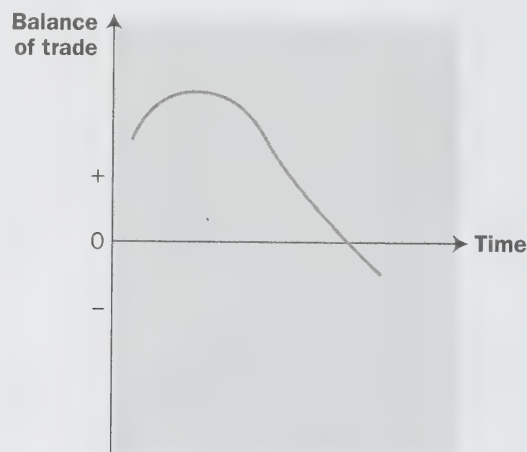


Figure 1

A good example of the relationship between export and import prices and the balance of trade came after the UK left the ERM in 1992. When the pound was allowed to float in September 1992 it depreciated against other major currencies. This constituted an unfavourable movement in the terms of trade, but it made the UK more competitive against other countries because export prices fell and import prices rose. However, because the short-run price elasticities were low, total spending on imports rose and the trade balance worsened in 1993. This was the J-curve effect, shown in Figure 2.

However, export growth picked up in 1994 and the trade deficit narrowed considerably. The rise in the pound in 1997 did not cause an immediate effect on the balance of trade, but is likely to damage it in the long run.

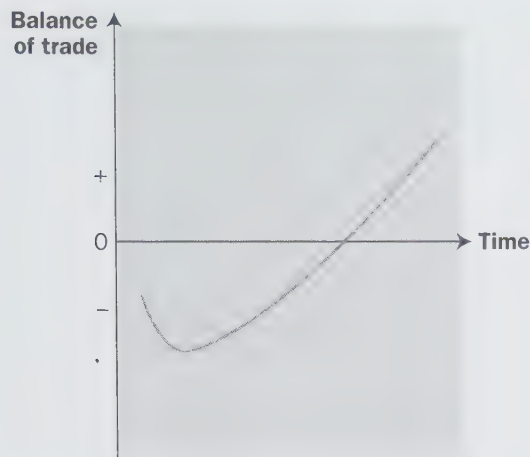


Figure 2

In conclusion, it is likely to be true that a favourable movement in the terms of trade will worsen the balance of trade in the long run. Favourable movements make an economy more uncompetitive, although they do mean that more foreign exchange is earned for each pound's worth of exports sold. When the pound depreciates, as it did in 1992, the terms of trade worsen. However, in 1992 many UK firms took advantage of the lower exchange rate to raise the sterling price of their exports and take a higher profit margin on export volumes. Others reduced the foreign price of their goods. The result, with a time lag, was an acceleration in real export growth in 1993–4.

General comments

The conclusion and the previous paragraphs attempt to apply a real world example to the question. This can be invaluable in an economics essay where the application of evidence to theory is so important.

Related question

- (a) Should a country be concerned if it has a deficit in trade in goods and services? (10)
- (b) How could such a deficit be (i) financed and (ii) eliminated? (15)

Essay 5

- (a) What do you understand by the term 'less developed country'? (5)
- (b) (i) How did the international debt of many less developed countries arise? (10)
- (ii) What has been done to deal with this problem? (10)

Tackling the question

Many A-level students now study development economics. This question has **three** parts and some students believe that this gives them a better opportunity of scoring a high mark than if all the marks were for a single 25-mark question. For example, a score of 3, 5 and 5 above would produce a comfortable pass mark. Part (a) is straightforward and a few concise paragraphs containing many of the characteristics of this type of economy will score well. The debt problem for less developed countries is well known, but this is a topic where being **up to date** is going to be **very important**.

Answer

(a) A **less developed country** (LDC) has a developing manufacturing base, but the vast majority of the population still work in the primary sector in activities such as agriculture, fishing and mining. Less developed countries tend to rely heavily on the export of primary products. These countries are likely to have lower literacy and numeracy levels than in the developed world. Infant mortality will be higher too. Infrastructure will be lacking in many areas of the country. Birth rates will be high while death rates, once high, will be falling due to improvements in health and sanitation. However, life expectancy will be much lower than in the developed world. A good measure of development is the **Human Development Index** (HDI) which takes into account a country's GDP per head as well as some of the social measures used above. The HDI scores a country

from 0 to 1 with developed countries such as the USA close to 1 and the world's poorest countries close to 0. Most less developed countries such as Ghana, Zambia and Uganda are likely to score less than 0.5 on the HDI.

(b) (i) Most of the countries with the heaviest international debt are in sub-Saharan Africa and Latin America. Africa owes most of its debt to foreign governments and multilateral lenders such as the IMF and the World Bank. The Latin American debt is mainly owed to commercial banks and because of relief agreements and high economic growth the problem is more manageable than in Africa. Africa has a very high debt service ratio: that is, debt repayments as a percentage of exports. In 1996 it was 236%. This enormous burden has led to arrears and many African governments have limited repayments in recent years to about 30% of their export earnings.

The problem of high debt among the LDCs had its origins in the 1970s and 1980s. They were encouraged to borrow by lenders in the West to aid their development. However, they soon ran into problems with repayments. Low growth in developed countries, high interest rates in the late 1970s and early 1980s, oil price rises in the 1970s and falling commodity prices all played their part. The terms of trade of the LDCs also deteriorated – on an index of 100 in 1985 they had fallen to 60 by 1993. In addition Africa's market share of its main exports such as cocoa, coffee, tea and palm oil has been declining in recent years. This reduced their ability to repay their debts. It has also been alleged that the loans to debtor countries were not put into investments that could yield adequate returns to service the external debt. The problem developed into a crisis by the late 1980s and early 1990s. In 1980 Africa's debt arrears were \$1.2bn, but by 1996 they were \$43bn.

(b) (ii) There have been several attempts to make the debt problem more manageable, mainly a combination of rescheduling agreements and highly concessional lending by the World Bank and the IMF. Since 1988 the Paris Club of government creditors has approved a series of debt relief initiatives which have attempted to lighten the burdens on the poorest countries. Meanwhile the World Bank has begun lending on a concessional basis using loans of up to 50 years without interest. The IMF has also introduced a soft loan facility conditional on widespread economic reforms. However, in spite of these initiatives the debt continues to outpace many countries' ability to service it. Arrears continue to rise as does the total debt. As a consequence in 1997 the World Bank and the IMF agreed to reduce the debt burden of 19 highly indebted poor countries

Use examples of less developed countries in the answer. It is important to ensure that some 'typical' LDCs are mentioned. Is Mexico an LDC?

This introduction serves to prepare the ground. The question is about international debt and a good answer should put the issue in context right at the start.

Bombard the examiner with relevant facts to keep picking up the marks. In an examination it is impossible to remember vast amounts of factual material but make good use of whatever you do know. Remember to stick to facts which are relevant to the question though.

Don't become involved in other problems of development economics – stick to the debt problem. Keep the structure of the essay tight.

to more sustainable levels. These countries included Uganda, Burkina-Faso and Mozambique. Many debtor countries have had to agree domestic policy reforms with the IMF as part of debt rescheduling and many African governments have introduced privatisation and liberalisation policies. It is hoped that the resulting higher growth rates will make it more likely that these countries will be able to service their debts in the future. As yet this hope remains unfulfilled with most African countries unable to service external debt.

General comments

Development economics incorporates many ideas from other sections of a mainstream A-level syllabus. It gives students the opportunity to apply concepts in a global sense. The danger in essay questions is writing answers which include sweeping generalisations and descend into waffle. For example, not all countries in the developing world fall into one category. Countries such as Mozambique are far poorer than Indonesia, for instance. The newly industrialised countries such as Taiwan and Korea are another dimension to development economics. Precise knowledge and clear arguments must be the basis of essay plans.

Related question

- (a) Distinguish between economic growth and economic development. (8)
- (b) Outline the different development strategies a less developed country could adopt. (17)

What are the cases for and against the UK joining with other European Union members in Economic and Monetary Union (EMU)?

(25)

Tackling the question

This has been and will remain a controversial issue for some time in the UK. It has also been a common question on examination papers in recent years. This essay is essentially about the single currency, although technically it is possible to have monetary union without a single currency. Exchange rates would just be locked together permanently. The essay should start with a bit of background on the single currency, i.e. how and when it will come about. Then the case for should be explained and with equal balance the case against. A conclusion should include brief discussion of the likely future direction of UK government policy towards the single currency.

Answer

European Economic and Monetary Union (EMU) will be brought about when a single currency operates within the European Union (EU). 1 January 1999 begins the final phase of a process that started with the European Monetary System (EMS) in the late 1970s and has been through the three stages of the 'Delors Plan', which includes the Exchange Rate Mechanism (ERM). In theory only those EU members that have met the Maastricht convergence criteria, which include targets on government borrowing, inflation and interest rates, can participate in the single currency. It is likely that some countries will 'fudge' their figures a little just to get in, while others may be allowed in if they are moving towards 'convergence'. A number of EU members will join in the first phase and their currencies will be replaced by the Euro. The UK has a 'wait and see' policy and may join early in the 21st century following a referendum.

The case for the UK going into the single currency is as follows. There will be no more currency speculation – at least between the UK and the rest of Europe. A truly single European market is impossible

Guidance notes

You cannot just dive into an essay on this topic without providing a bit of background. This paragraph puts the arguments which will follow into context. It also gives the reader the impression that you are confident about the question.

without the Euro. Firms will benefit from significant productivity gains, operating freely with a huge market. Imagine the single market of the USA without the dollar. EMU will go ahead whether the UK joins or not.

Being outside could put the UK at a competitive disadvantage. France and Germany may be so annoyed at the UK's failure to join the single currency that they might renege on their commitment to allow the UK some privileges of the single market. Legally, they cannot discriminate against UK companies, but covert barriers could put UK firms at a disadvantage. Inward investment might start to seep outwards, as the foreign-owned car plants and electronics factories in the UK move into the Euro zone. Companies such as General Motors have given veiled threats that they will move their UK plants to EU members that are in the single currency.

The UK will not lose any real freedom to manoeuvre on fiscal policy. It can still tax and spend as much or as little as it likes. Borrowing is already constrained by the financial markets. However, if the UK were to break the 'deficit criteria', the stabilisation pact means that fines would be imposed on the UK. The UK would not lose a huge amount of genuine freedom over monetary policy, being heavily affected by European interest rates anyway.

A single currency will force the UK to confront long-term economic failings. In the past, when UK goods have been uncompetitive compared with foreign goods, the UK has devalued the pound to let goods become cheaper on foreign shelves. This occurred after the exit from ERM in 1992. Many economists say this has led UK companies to avoid investing and making improvements to remain genuinely competitive with foreign firms. Devaluation is an easy short-term solution if UK inflation is running higher than inflation abroad. If the UK cannot devalue – by being locked into the Euro – it will have to face up to its economic problems.

Joining will make it easier to convince the financial markets that the UK is serious about keeping inflation low. The markets will view sterling as a weaker currency compared to the Euro and a greater inflationary risk. They will demand higher interest rates to protect their assets against inflation. But higher interest rates will reduce investment by UK firms, be bad for jobs and may deter inward investors. An effective European regional policy could counteract some of the problems of having a single interest rate for various countries. Countries could run higher deficits while their economies were undergoing difficulties. Other nations could share the burden by transferring resources towards the country in trouble. However, taxpayers would have to consent to paying more money to help people in other countries.

The case for staying out of the single currency is as follows. The single currency will not bring significant advantages above and

The lack of stability in the UK economy over the years has been seen by many economists as a cause of low investment and low growth. Will the Euro give the UK economy greater stability?

beyond the single market and the UK would suffer by losing control of its fiscal and monetary policy. Economists disagree passionately about how much control the UK would really lose and about how much it would suffer, or benefit, if it did. Interest rates would be set by a European Central Bank, rather than the Bank of England. There would be constraints on how much governments could borrow. It is not sensible to have a single interest rate for all European countries, since they differ. Interest rates and exchange rates are useful tools for adjusting to shocks. Response to economic change depends on the country affected. For example, the UK economy is more closely linked to the USA than to other European economies. If the USA has a recession, the UK – but perhaps no other country – might need an interest rate cut to help her companies and prevent a recession. But with a Euro-based economy, that kind of adjustment would not be possible. The EU countries are often at different positions on the trade cycle and thus a single interest rate is inappropriate across the EU.

The UK should not have the same interest rates as other European countries because our economy reacts in a different way when interest rates alter. The UK, far more than France and Germany, is heavily dependent on mortgages. If interest rates go up, mortgage repayments rise and consumers suffer. An increase in interest rates could choke off inflationary pressure far more severely in the UK than in other European countries. The deflationary bias of the convergence criteria and the penalties imposed by the 'stability pact' put enormous pressure on the participating economies. There is also the high cost of converting the price lists, shop tills and bank accounts to the Euro. Alongside these costs is the major task of withdrawing sterling and replacing it with the Euro.

It is unlikely that the UK will join in the 'first wave' of members taking part in EMU. However, there will be a 'core' of countries taking part by the beginning of the 21st century. Many economists, while recognising the benefits of a single currency, argue that the convergence criteria are too narrow. Greater convergence on such things as real wage rates and unemployment rates may be necessary for EMU to come about with less pain to member states. With the EU enlarging eastwards over the coming years it is unlikely that all new members will immediately participate in EMU. If the UK stays out of the single currency, it will not be alone.

At present the UK economy is buoyant with high economic growth, but France and Germany have rising unemployment.

Going into the single currency is seen by economists as irreversible.

New members of the EU are likely to be Hungary and the Czech Republic. Enlargement will eventually involve most of the old communist countries of Eastern Europe plus Cyprus and Malta.

General comments

In October 1997 the European Commission issued its final economic forecasts before the countries which will join the single currency are chosen in Spring 1998. It was predicted that 14 out of the 15 European Union countries would be eligible to join the Euro. Only Greece was ruled out because it failed to meet the Maastricht convergence criteria. The UK, Sweden and Denmark have yet to decide whether they wish to join the single currency. Economic growth in the European Union is expected to rise from 2.6% in 1997 to 3% in 1998. This will make it easier for countries to meet the budget deficit criterion for membership of the single currency, which is 3% of GDP.

Related question

- (a) What are the Maastricht convergence criteria for membership of the European single currency? (10)
- (b) Critically assess the convergence criteria as necessary conditions for the introduction of a single currency in the European Union. (15)

About the Series

The aim of the Exam Success Guide series is simple: to help you improve your grades by demonstrating the techniques and skills essential for success.

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